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June 18, 2007

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
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CHIEF CLERKS OFFICE

VIA HAND DELIVERY

Ms. LaDonna Castañuela
Office of Chief Clerk (MC-105)
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: Protestant's, the City of El Paso's, Comments on the Applicant's Modeling Analyses and Summary of Modeling Results and the Executive Director's Report to the Commission on Renewal of Asarco Incorporated's Air Quality Permit No. 20345, *Application of ASARCO Incorporated for Renewal of Air Quality Permit No. 20345*, TCEQ Docket No. 2004-049-AIR, SOAH Docket No. 582-05-0593.

Dear Ms. Castañuela:

Enclosed for filing in the above-referenced proceeding is an original and eleven copies of *Protestant's, the City of El Paso's, Comments on the Applicant's Modeling Analyses and Summary of Modeling Results and the Executive Director's Report to the Commission on Renewal of Asarco Incorporated's Air Quality Permit No. 20345.* Please file this on behalf of the City of El Paso in the above-referenced matter.

If you have any questions, please telephone me at the above number.

Sincerely,

Erich M. Birch

ENCLOSURE
cc: Service List
Mr. Charlie McNabb, City Attorney
Ms. Laura Prendergast Gordon, Deputy City Attorney

TCEQ DOCKET NO. 2004-0049-AIR
SOAH DOCKET NO. 582-05-0593

APPLICATION OF ASARCO INCORPORATED FOR RENEWAL OF AIR QUALITY PERMIT NO. 20345	§ § § §	**BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

PROTESTANT'S, THE CITY OF EL PASO'S, COMMENTS ON THE APPLICANT'S MODELING ANALYSES AND SUMMARY OF MODELING RESULTS AND THE EXECUTIVE DIRECTOR'S REPORT TO THE COMMISSION ON RENEWAL OF ASARCO INCORPORATED'S AIR QUALITY PERMIT NO. 20345

JUNE 18, 2007

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TO THE HONORABLE COMMISSIONERS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY:

COMES NOW, Protestant, the City of El Paso ("El Paso" or the "City") and presents this its *Comments on the Applicant's Modeling Analyses and Summary of Modeling Results and the Executive Director's Report to the Commission on Renewal of Asarco Incorporated's Air Quality Permit No. 20345* ("Comments") in the above-referenced proceeding.

I. INTRODUCTION

The impact of a potential restart of ASARCO LLC's ("Asarco") copper smelter in El Paso ("Asarco El Paso Plant") cannot be overstated. While the *Executive Director's Report to the Commission on Renewal of ASARCO Incorporated's Air Quality Permit No.* 20345 ("ED Report")[1] has boiled down a so-called comprehensive review of the Asarco El Paso Plant into a thirty page report, nothing about the Asarco El Paso Plant is simple. Instead, as demonstrated at the Hearing on the Merits in this proceeding, virtually everything concerning the Asarco El Paso Plant is unique and complex. The Asarco El Paso Plant is the only one of its kind in Texas and one of only four copper smelters in the United States. The Asarco El Paso Plant is located immediately adjacent to both a state border and an international border, and it is

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[1] Executive Director's Report to the Commission on Renewal of ASARCO Incorporated's Air Quality Permit No. 20345, *Application of Asarco Incorporated to Renew Air Quality Permit No. 20345*, TCEQ Docket No. 2004-0049-AIR (May 1, 2007) [hereinafter ED Report].

located immediately adjacent to two thriving and growing metropolitan areas.[2] No other copper smelter in the United States is located in such a densely populated and growing international metropolitan area. In addition, the Asarco El Paso Plant is located in a complex geographic terrain, in the narrowest section of the "pass" between the Franklin Mountains and the Sierra de Juárez, and is subject to inversions that trap pollutants. The plant is also located in an area with elevated background levels of metals, *e.g.*, lead and arsenic, in the soils.

The complex permitting history and operation of the Asarco El Paso Plant was addressed in detail at the two-week Hearing on the Merits in July 2005. Through the course of thousands of pages of testimony and exhibits, *i.e.*, evidence, the parties focused on multiple controversial issues regarding the Asarco El Paso Plant, and based on that evidentiary record, the Administrative Law Judges ("ALJs") and the Commissioners of the Texas Commission on Environmental Quality ("TCEQ" or the "Commission") agreed that Asarco had failed to meet its burden of proof.[3] Asarco had failed to prove that operation of the Asarco El Paso Plant pursuant to Air Quality Permit No. 20345 would not cause or contribute to a condition of air pollution.

The Commission then, through its Interim Order, required the Executive Director of TCEQ and Asarco to compile additional information related to Asarco's past permitting actions in revising Air Quality Permit No. 20345, the condition and effectiveness of existing pollution control equipment and practices, and new air quality modeling, providing specific guidelines on

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2 As identified at the Hearing on the Merits, the 2005 population of the City of El Paso was 614,261 people. The 2005 population of Ciudad Juárez, Chihuahua, México, was 1,368,175 people. *See* City of El Paso Exh. 2, Prefiled Testimony of Ms. Verónica Rosales, at 10-11. The other three copper smelters in the United States are located in Garfield, Utah, Hayden, Arizona, and Miami, Arizona.

3 *See* Proposal for Decision, *Application of Asarco Incorporated to Renew Air Quality Permit No. 20345*, SOAH Docket No. 582-05-0593, TCEQ Docket No. 2004-0049-AIR, at 2 & 130 (Oct. 27, 2005) [hereinafter PFD]; *see also* Texas Comm'n on Envtl. Quality, *An Interim Order Concerning Application of ASARCO, Incorporated to Renew Air Quality Permit No. 20345*, TCEQ Docket No. 2004-0049-AIR, SOAH Docket No. 582-05-593, at 1 (Mar. 10, 2006) [hereinafter Interim Order].

the breadth and details to be included.[4] The information compiled by the Executive Director and Asarco is included in the ED Report and related attachments, a document filed by the Executive Director with the Commission almost fourteen months after issuance of the Interim Order. The ED Report and Asarco's air modeling analyses and related modeling report fail to address the issues raised by the Commission at its February 8, 2006 Agenda meeting and provide no information on which the Commission can rely in making its final decision in this proceeding.

The City and the other named Protestants to this proceeding have been prejudiced by the extremely short time period they have been allowed in which to conduct their review of a complicated technical report. Asarco, the Executive Director, and reviewing consultants retained by Asarco took over fourteen months from the time the Interim Order was issued to prepare the information summarized in the ED Report, far exceeding the eight-month deadline established by the Commission in the Interim Order. As discussed below, without obtaining approval from the Commission, Asarco and the Executive Director took an additional six months beyond the deadline stated in the Interim Order to prepare the ED Report.

After its initial review of the ED Report and Asarco's air quality modeling analyses, and well in advance of the seven-week review and comment deadline provided for in the Interim Order, the City requested additional time to conduct a thorough review of the ED Report.[5] However, the City was notified that no extension would be provided prior to the end of the

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4 *See* Interim Order, *supra* note 4, at 2.

5 *See* Protestant's, the City of El Paso's, Request for Extension to File Comments on Applicant's Modeling and the Executive Director's Report, *Application of Asarco Incorporated for Renewal of Air Quality Permit No. 20345*, SOAH Docket No. 582-05-0593, TCEQ Docket No. 2004-0049-AIR (May 22, 2007).

seven-week timeframe;[6] therefore, the City provides these Comments within the timeframe contemplated by the Commission in the Interim Order. In order to meet the deadline the City could not conduct a complete technical review of the ED Report and Asarco's modeling analyses. Instead, these Comments focus on certain issues either raised by or omitted from the ED Report and Asarco's modeling analyses.

While the City could not complete a comprehensive review of the ED Report and Asarco's modeling analyses, as shown in the comments below, it is clear that the ED Report and Asarco's modeling analyses do not provide additional information on which the Commission can rely as a basis for a final decision in this proceeding. At this time, for the reasons identified below, the Commission should either (1) deny Asarco's application for renewal of Air Quality Permit No. 20345; or (2) refer the proceeding to the State Office of Administrative Hearings ("SOAH"), instructing the ALJs to reopen the record pursuant to Texas Administrative Code Title 30, Section 80.265 for further proceedings on specific issues in dispute.

II. BECAUSE OF ITS FAILURE TO COMPLY WITH THE PERMITTING REQUIREMENTS AS ESTABLISHED BY THE COMMISSION IN THE INTERIM ORDER, ASARCO'S RENEWAL APPLICATION SHOULD BE DENIED

After consideration of the Proposal for Decision ("PFD") and Proposed Order, as prepared by the ALJs who conducted the two week Hearing on the Merits in July 2005, the Commission concluded that Asarco had failed to meet its burden of proof for renewal of Air Quality Permit No. 20345. Specifically, the Commission's Interim Order stated:

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6 *See* Letter from Mr. Derek Seal, General Counsel, Texas Comm'n on Envtl. Quality, to All Persons on the Attached Mailing List (June 5, 2007). The General Counsel's letter did note that the City's Request for Extension, as well as the Executive Director's Request for Extension filed in November 2006, which while never acted on by the Commission had been taken *sua sponte* by the Executive Director without Commission approval, would be considered when the Commission met to consider the ED Report, comments on the ED Report, and the Executive Director's response to comments. *See id.*

> . . . the Commission determined that ASARCO Incorporated (Applicant or ASARCO) had not met the statutory requirements for renewal of its permit. Specifically, the Commission determined that, based on the evidentiary record from SOAH and particularly, the findings of the ALJs with regard to predicted exceedances of the significance level for PM_{10}, $PM_{2.5}$ and NO_X and of the SO_2 area control plan compliance standard, ASARCO has failed to demonstrate the effectiveness of its existing emission control equipment and practices as provided in Section 382.055(d)(2), which is a minimum condition for renewal of its permit.[7]

The Commissioners did not deny Asarco's application at that time, but instead, identified in the Interim Order that Asarco and the Executive Director were to compile specified information within explicit timeframes defined by the Commission. The Commission was to again consider this matter after completion of the steps outlined in the Interim Order.

The Interim Order identified two deadlines related to completion of the ED Report:

> 3. The Executive Director is directed to conduct concurrently within the same six-month period a vigorous investigation of all air quality control equipment at the El Paso Plant, including related practices, and based on that investigation and the results of the information submitted in accordance with Ordering Provision 2 prepare his recommended Report and any related Schedule as required under Section 382.055 of the TCAA, which includes his written assessment of the sufficiency of existing plant control equipment and practices, within eight months of issuance of this Interim Order. In addition, the Executive Director is to assess the appropriateness of a permit amendment application rather than a renewal application for equipment that has not been previously authorized or that requires repair or replacement [*i.e.*, by Friday, November 10, 2006].
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> 4. The Applicant's modeling analyses and the summary of the modeling results and the Executive Director's recommended Report and any related Schedule, which includes his written assessment of existing plant control equipment and practices, shall be made available to all parties by filing a copy in the El Paso regional office and in the Austin Office of the Chief Clerk. In addition, a copy of the summary of the modeling results and the Executive Director's recommended Report and any related Schedule shall be mailed to all parties on the official mailing list for the Proposal for Decision Filings and mailing of documents in accordance with this ordering provision shall occur within two weeks of the end of the eight month period described in Ordering Provision No. 3 [*i.e.*, by Monday, November 27, 2006].[8]

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7 Interim Order, *supra* note 3, at 1.

8 *Id.* at 11-12.

The Executive Director failed to complete and file the required ED Report by the November 10, 2006 deadline and instead filed the *Executive Director's Interim Report and Request for Extension* ("ED's Interim Report") on that date.[9] As identified in the ED's Interim Report, and as made clear by the information provided in the ED Report when it was finally filed with the Commission on May 1, 2007—almost six months after the deadline established by the Commission, Asarco failed to provide information necessary for the Executive Director to meet his deadlines as established in the Interim Order. Asarco failed to take the steps necessary to ensure that all timeframes, as established in the Interim Order, were met; and thus, Asarco failed to timely provide the information necessary to meet its burden of proof in support of approval of its renewal application. Asarco's application should be denied due to Asarco's failure to meet the permitting requirements as identified by the Commission in the Interim Order.

A. Asarco's Failure to Provide Required Information to the Executive Director Resulted in the ED Report Being Completed Approximately Six Months After the Deadline Established in the Interim Order

As previously detailed by the City in other pleadings that are pending before the Commissioners, within a few weeks of the issuance of the Interim Order, the Executive Director wrote to Asarco, identifying that "because ASARCO has failed to demonstrate the effectiveness of its existing emission control equipment and practices, the investigations required to comply with the Interim Order exceeds the scope of the agency's normal permit renewal process and will require resources beyond those appropriated to the agency for that process . . . ."[10] The

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9 *See* Executive Director Interim Report and Request for Extension, *Application of Asarco, Inc. to Renew Air Quality Permit No. 20345*, TCEQ Docket No. 2004-0049-AIR, SOAH Docket No. 582-05-0593 (Nov. 10, 2006) [hereinafter ED's Interim Report].

10 *See* Letter from Mr. Glenn Shankle, Executive Director, Texas Comm'n on Envtl. Quality, to Mr. Lairy Johnson, ASARCO, Inc., at 1 (May 5, 2006) (Attachment C to the ED Report) [hereinafter May 5 ED Letter].

Executive Director required Asarco to retain one or more qualified independent third parties to complete certain tasks identified in the letter:

- a qualified modeler to perform an audit of all modeling performed by ASARCO in accordance with the attached modeling protocol;
- a process engineer to determine the condition and effectiveness of all air quality control equipment and related practices located at the Copper Smelter pursuant to Ordering Provision 3 of the Interim Order; and,
- a process engineer to review all air quality control equipment in comparison with all requirements of ASARCO's existing permit 20345 pursuant to Ordering Provision 3 of the Interim Order. Additionally, the process engineer will review and determine whether the Copper Smelter will operate in accordance with industry standards and practices.[11]

The Executive Director's letter established a September 8, 2006 deadline for Asarco to provide "all information obtained and assessments performed" as required by the Interim Order and the May 5, 2006 letter.[12]

Over the next several months, the Executive Director, through correspondence to Asarco, reiterated Asarco's responsibility to obtain the appropriate third party consultants, at one point stating:

> [S]taff has been unable to determine that existing plant control equipment and practices are sufficient and that the plant can operate in accordance with permit conditions and with industry standards and practices. Without such a finding, I cannot recommend approval of the renewal of ASARCO's permit.
>
> The options of a third party process engineer assessment of ASARCO's equipment and practices and a third party audit of any modeling results that ASARCO [*sic*] are not viable if my staff does not have sufficient time to review and prepare the report required under the Interim Order. The lack of process on hiring third party contractors has significantly affected my ability to comply with the prescribed timeframes for the preparation of the report as required by the

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11 *Id.* at 2.

12 *Id.*

> Interim Order. *As the party with the burden of proof, ASARCO is responsible for ensuring that it provides the information necessary for commission evaluation.*[13]

The above statement was provided in a letter to Asarco on September 12, 2006—four days after the deadline originally established by the Executive Director in his May 5 letter. While Asarco was well-aware of the timeframes established in the Interim Order and as interpreted by the Executive Director and while Asarco has repeatedly asserted the importance of this permit and decried the length of the permitting process, it repeatedly failed to take steps to ensure compliance with the Interim Order.

Asarco blamed its failure to meet the requirements of the Executive Director's May 5 letter on its bankruptcy status, but yet Asarco did not file an application with the Bankruptcy Court regarding a third party consultant until September 15, 2006[14]—over six months after the date of the Interim Order and one week after the Executive Director's deadline for the third party consultant review *to be completed.* Asarco's September 15 application to the Bankruptcy Court only addressed retention of a third party consultant to audit the air quality modeling, so while filed over four months after the Executive Director's May 5 letter, Asarco's petition to the Bankruptcy Court did not even seek to comply with the entirety of the Executive Director's requirements regarding third party consultants.[15]

In addition, the professional services agreements between Asarco and the two third-party consultants, EHP Consulting, Inc. ("EHP") and Arnold Srackangast, were not executed until

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13 Letter from Mr. Glenn Shankle, Executive Director, Texas Comm'n on Envtl. Quality, to Mr. Lairy Johnson, ASARCO, Inc. (Sept. 12, 2006) (emphasis added).

14 *See* ASARCO LLC's Expedited Application for Order under 11 U.S.C. §§ 327(a) and 328(a) Authorizing the Retention and Employment of Special Purpose Environmental Professional, *In re: ASARCO LLC,* et al., Case No. 05-21207 (S.D. Tex. Bankr Ct. Sept. 15, 2006).

15 As identified above, the Executive Director's May 5, 2006 letter identified that third party consultants were needed to complete multiple tasks, but Asarco's application to the Bankruptcy Court only sought permission "to retain and employ Arnold Srackangast as special purpose environmental professional to conduct, at the request of the Texas Commission on Environmental Quality (the "TCEQ"), an air quality modeling audit for the El Paso smelter . . . ." *Id.* at 1.

January 2007 and February 2007, respectively.[16] The process engineer third party consultant, EHP, did not inspect the Asarco El Paso Plant until January 2007,[17] and EHP's report to TCEQ is dated April 9, 2007.[18] The report from the third party consultant responsible for auditing Asarco's air quality modeling, Mr. Srackangast, was provided to TCEQ even later, dated April 23, 2007.[19] All of these events related to the third-party consultants occurred weeks and months after the Commission's deadline of November 10, 2006 for *completion* of the ED Report.

B. Asarco Failed to Provide the Completed and Final Modeling Analyses by the Deadline Established by the Commission in the Interim Order

While Asarco's foot-dragging made it impossible for the Executive Director to meet the deadlines established in the Interim Order, it is more disturbing that Asarco also failed to meet the deadline established in the Interim Order for it to complete new modeling. The Commission required Asarco to "submit additional information regarding all emissions from and related to the El Paso Plant and their impacts on surrounding areas, including current modeling results, within six months of issuance of this Interim Order,"[20] or by September 11, 2006. While the Commissioners' discussion at the February 8, 2006 Agenda meeting made it clear that new,

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16 *See* Professional Services Agreement Contract No. _____ for Project Name El Paso Smelter Air Pollution Control Audit for TCEQ by and between Asarco LLC and EHP Consulting, Inc. at 12 (Attachment E to the ED Report) [hereinafter EHP Professional Services Agreement]; Professional Services Agreement Contract No. _____ for Project Name El Paso Smelter Air Quality Modeling Audit for TCEQ by and between Asarco LLC and Arnold R. Srackangast at 12 (Attachment E to the ED Report) [hereinafter Srackangast Professional Services Agreement].

17 *See* ED Report, *supra* note 1, at 19.

18 *See* Eric Partelpoeg, EHP Consulting, Inc., Asarco El Paso Smelter Review and Comments (Apr. 9, 2007) (Attachment K to the ED Report) [hereinafter EHP Review].

19 *See* Arnold R. Srackangast, Independent Third Party Audit of the Air Quality Analysis for ASARCO Incorporated El Paso Smelter Plant Renewal of TCEQ Permit No. 20345 (Apr. 23, 2007) (Attachment L to the ED Report). With Mr. Srackangast's report dated April 23, 2007, at most, TCEQ would have had only one week to review and fully evaluate Mr. Srackangast's third-party audit of Asarco's modeling. Such a short review period calls into question the completeness of TCEQ's evaluation of Mr. Srackangast's report and recommendations.

20 Interim Order, *supra* note 3 at 11.

significantly more detailed modeling would be required of Asarco within six months of issuance of the Interim Order, it appears that Asarco did not meet with the Executive Director's staff regarding modeling until May 2006.[21] It also appears that Asarco met with the Executive Director's permitting and modeling staff again in late July or August to review Asarco's modeling approach and interim report.[22] Asarco then submitted what should have been its final air quality modeling analyses to the Executive Director on September 11, 2006.[23] But, while Asarco had met with the Executive Director on several occasions between May 2006 and its "final" modeling submittal on September 11, 2006, the Executive Director found a number of deficiencies in Asarco's "final" modeling analysis.[24]

The letter from TCEQ to Mr. David Cabe, P.E., Asarco's consulting engineer that completed the modeling, raised a number of deficiencies with the "final" modeling analysis and stated that "additional information is needed to complete our review of your air quality analysis."[25] Regarding both meteorological input data and background monitoring data, TCEQ requested additional information because, based on the information provided by Asarco, TCEQ could not "determine the appropriateness and reasonableness of the analysis."[26] In addition, TCEQ raised concerns that numerous discrepancies regarding the elevations of receptor locations would result in serious errors regarding predicted concentrations of emissions, stating: "A discrepancy of this magnitude will significantly alter the predicted concentrations at these

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21 *See* Letter from Mr. Lairy Johnson, P.G., Plant/Environmental Manager, ASARCO LLC, to Mr. Glenn Shankle, Executive Director, Texas Comm'n on Envtl. Quality at 1 (July 18, 2006).

22 *See* Letter from Mr. David Cabe, P.E., Zephyr Envtl. Corp., to Mr. Glenn Shankle, Executive Director, Texas Comm'n on Envtl. Quality (July 24, 2006).

23 *See* ED Report, *supra* note 1 at 16.

24 *See* Letter from Mr. Robert Opiela, Air Permits Division, Texas Comm'n on Envtl. Quality, to Mr. David Cabe, P.E., Zephyr Envtl. Corp. (Oct. 9, 2006).

25 *Id.* at 1.

26 *Id.* at 1-2.

locations."[27] Basically, based on the incomplete information submitted by Asarco on September 11, 2006, TCEQ air quality permitting staff were unable to determine how Asarco reached its modeling conclusions and had identified serious discrepancies with certain data that could result in critical errors in the modeling conclusions. Asarco did not provide a corrected modeling analysis until November 22, 2006, over two and one-half months after the Interim Order deadline.

C. Asarco's Violation of the Ordering Provisions of the Interim Order Should Result in the Immediate Denial of Asarco's Application for Renewal of Air Quality Permit No. 20345

While Asarco missed the modeling deadline under the Interim Order and forced the Executive Director to miss the deadlines regarding the ED Report due to Asarco's failure to timely provide third party consultants, it never petitioned the Commission, or even the Executive Director, for an extension of the timeframes, nor did Asarco ever provide any explanation as to why the deadlines were being missed. Asarco has not filed a single document in over a year to address concerns that the deadlines as established in the Interim Order would be missed. As with any other Commission-established deadlines, the deadlines set out in the Interim Order are binding on Asarco, and Asarco failed to comply with the requirements of the Interim Order, apparently without remorse and with apparent disdain that the deadlines were applicable to them at all. Asarco ignored the deadlines established by the Commission and the Executive Director, hindered the Executive Director's processing of the renewal application pursuant to the Interim Order, and delayed this proceeding for months.

Pursuant to Commission rules and policies, applicants do not have open-ended timeframes for providing required information to the Commission for the processing of their

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[27] *Id.* at 2.

applications. Applicants who delay the processing of their own applications are not given multiple opportunities for further delay. Instead, their applications are returned, voided, or denied. These same policies must be applied to Asarco after these months of delay. Asarco's failure to timely provide the information required by the Interim Order, thus violating the Ordering Provisions of the Interim Order, should result in the immediate denial of Asarco's application.

III. THE ED REPORT INACCURATELY SUMMARIZES ASARCO'S PAST PERMITTING ACTIONS

Through the Interim Order, the Commission directed the Executive Director to "assess the appropriateness of a permit amendment application rather than a renewal application for equipment that has not been previously authorized or that requires repair or replacement."[28] Pages six through fifteen of the ED Report provide the Executive Director's review of the changes made by Asarco to Air Quality Permit No. 20345 for the Asarco El Paso Plant during its operation from 1993 to 1999.[29] This section of the ED Report is replete with deficiencies regarding the analysis of certain key changes made to the Asarco El Paso Plant during that time period. Each one of the changes identified below was improperly approved at the time, was a circumvention of TCEQ regulations, and should have been approved through a permit amendment with public notice and an opportunity for public participation.

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28 Interim Order, *supra* note 3, at 11.

29 *See* ED Report, *supra* note 1, at 6-15.

A. Asarco Modified the ConTop Reactors Without Obtaining TCEQ Approval

While the ED Report provides a cursory review of the fourteen[30] various permitting applications that Asarco submitted to TCEQ after issuance of Air Quality Permit No. 20345 in 1992, it completely overlooks the one application that Asarco should have submitted and was required to submit pursuant to TCEQ's air quality permitting requirements.[31] As was made clear at the Hearing on the Merits in this proceeding, the "ConTop" reactors at the Asarco El Paso Plant were replaced shortly after start-up of the ConTop facilities. Asarco failed to seek an amendment or other revision to Air Quality Permit No. 20345 to authorize replacement of these major sources of air pollution in violation of TCEQ rules.

The purpose of the 1992 issuance of Air Quality Permit No. 20345 was to permit the copper smelting operations at the Asarco El Paso Plant, including the new ConTop reactors. The ConTop reactors replaced the previously grandfathered furnace copper smelting facilities. Asarco replaced the ConTop reactors with newly-designed reactors within just a few months after the start-up of the ConTop facilities. Mr. Lawrence Castor, the Plant Manager of the Asarco El Paso Plant, testified that the first of the two ConTop reactors was replaced two to three months after start-up and that Asarco replaced the second of the two ConTop reactors about a month later.[32] As identified by Mr. Castor:

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30 Previous pleadings submitted by the City referred to 14 permitting actions. The Executive Director identifies 15 permitting actions because he includes the March 16, 1999 shutdown letter as a permitting action.

31 It is particularly troublesome that the Executive Director would fail to even address the replacement of the "ConTop" reactors in the ED Report since the replacement of the reactors and the potential permitting implications for Asarco were specifically questioned by former Commissioner Ralph Marquez when this matter was before the Commissioners in February 2006. *See* Audio Recording of February 8, 2006 Commissioners' Agenda Meeting.

32 Tr. at 369-70 (Cross Exam (by Ms. Anne Rowland) of Mr. Lawrence Castor). All citations to "Tr." are to the transcript of the Hearing on the Merits that was held in July 2005.

Q. Did you change the whole reactor? You put two whole new reactors in, did you not?

A. Yes, we did.[33]

While the ConTop reactors were the main facilities permitted pursuant to the 1992 permit, Asarco failed to even notify the Commission, must less seek an amendment or other revision to Air Quality Permit No. 20345, regarding replacement of the ConTop reactors with other reactors that had been designed and built in-house by Asarco.[34] The changes made to the ConTop reactors were known only to Asarco and its design personnel. In fact, TCEQ's permit engineer who had reviewed Asarco's 1992 permit application as well as all subsequent permitting actions through 2005, Mr. LeRoy "Skip" Clark, P.E., testified that the ConTop reactors were permitted facilities, that he was not aware that the replacement of the two reactors had occurred in 1993, and that he had only learned of the replacement of the reactors during the Hearing on the Merits.[35]

Commission rules specifically provide that a modification to an existing permitted facility must be handled through an amendment or other type of revision to the permit.[36] Because Asarco never notified TCEQ of the modifications to the reactors it is not possible for TCEQ or other parties, such as the City, to evaluate what type of revision to the existing permit was required, but based on TCEQ rules, it is clear that a minimum of notification was required.[37]

Based on the evidentiary record it is clear that a key piece of permitted equipment at the Asarco El Paso Plant was removed and replaced with a new piece of equipment without the

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33 *Id.* 425.

34 *See id.* at 206 (Cross Exam (by Mr. Michael Wyatt) of Mr. Lawrence Castor).

35 *See id.* at 1726 (Cross Exam (by Mr. Erich Birch) of Mr. LeRoy "Skip" Clark, P.E.).

36 *See* 30 TEX. ADMIN. CODE §§ 116.110 & 116.116 (2007).

37 Commission rules at 30 TEX. ADMIN. CODE § 116.110(a) specify the requirements for modification of an existing facility. Since Asarco provided no information on the modifications made to its two ConTop reactors, TCEQ could not evaluate the air quality impacts of the modification.

knowledge of TCEQ and without a complete evaluation of what impact the changes might have on emissions from the Asarco El Paso Plant. Instead, the Asarco El Paso Plant operated from 1993 until its shutdown in 1999 with this unauthorized equipment.

Asarco's replacement of the ConTop reactors without TCEQ knowledge or approval also raises a serious compliance and enforcement issue. The replacement reactors that operated from 1993 to 1999 were unauthorized air pollution sources operating without a permit. The Commission identifies facilities operating without permits in its highest category of criteria for initiating enforcement actions,[38] and typically assesses administrative penalties for the entire duration of time that a facility operates without a permit. To this day, Asarco's ConTop reactors remain unpermitted facilities, and TCEQ should bring an appropriate enforcement action against Asarco for its unauthorized operations.

There is no discussion whatsoever in the ED Report regarding the replacement of the ConTop reactors, or even an acknowledgement that the replacement occurred. Without a full evaluation of the replacement, it is impossible to know exactly what physical changes were made to the reactors or what impact on the process or emissions might have resulted from the changes. What is clear is that the ED Report fails to address a key modification of facilities at the Asarco El Paso Plant, and because of that omission, it is impossible to rely on the accuracy and

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38 *See* Texas Comm'n on Envtl. Quality, *Enforcement Initiation Criteria (EIC)*, Rev. 11, at 6 (May 7, 2007).

completeness of the entirety of the Executive Director's evaluation of existing Asarco facilities and previous Asarco permitting actions as set out in the ED Report.[39]

B. Asarco's Permit Amendment Applications to Increase SO_2 Emission Rates and Annual Hours of Operation for the Fluid Bed Concentrate Dryer, the Two Sulfuric Acid Plants, and the Wastewater Treatment Plant Were Improperly Authorized and Circumvented TCEQ Air Quality Permitting Rules in Violation of 30 TEX. ADMIN. CODE § 101.3

On September 13, 1994, approximately one year after startup of the Asarco El Paso Plant, Asarco submitted a permit amendment to increase the permitted emissions of sulfur dioxide (SO_2) from the Asarco El Paso Plant by 3,600 tons per year (TPY).[40] This increase represented a doubling of the SO_2 emission levels that were authorized under Air Quality Permit No. 20345. A permit amendment is required for a change in a permit representation that results in a change in the method of control of emissions, a change in the character of emissions, or an increase in the emission rate of any air contaminant.[41] As noted in the ED Report, amendment applications are reviewed in the same manner as applications for a new air quality permit, including public notice and participation.[42]

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39 While the above discussion focuses on the failure to evaluate the replacement of the ConTop reactors, it also brings into question the Executive Director's conclusions regarding the site investigation of the Asarco El Paso Plant. The ED Report states: Based upon observations from the conducted investigation, all major process and abatement equipment and components, including associated operational controls and infrastructure required by the air quality permit, were present, intact, and in generally satisfactory condition." ED Report, *supra* note 1, at 6. The ConTop reactors, as permitted by TCEQ, have been replaced with Asarco-designed and installed reactors, and thus the major process and abatement equipment and components required by the air quality permit are not present and intact. The ED Report fails to address a key modification of facilities at the Asarco El Paso Plant, and because of that omission, it is impossible to rely on the accuracy and completeness of the entirety of the Executive Director's evaluation regarding the condition of existing Asarco facilities.

40 *See id.* at 9. After startup of the Asarco El Paso Plant in 1993, the actual SO_2 emission levels were not discovered until emissions testing was conducted in 1994.

41 *See* 30 TEX. ADMIN. CODE § 116.116(b)(1) (2007).

42 *See id.* § 116.116(b)(2).

Instead, in 1994 Asarco reasoned, and the Executive Director accepted, that a contested case hearing had already been held only two years prior to the amendment application, that no new issues would be raised if the SO_2 emissions were doubled, that the increase would not result in non-compliance of the National Ambient Air Quality Standard ("NAAQS") for SO_2, and that the permit would have been approved anyway had the original application included this higher emission rate.[43] In addition, Asarco asked "in writing" that public notice be waived.[44] Asarco and the Executive Director agreed that the requirements under state law for public notice and opportunity for participation could be waived. If Asarco and the Executive Director had not agreed to this approach, then Asarco would have been faced with the prospect of having to either reduce its production rates in order to meet its permitted emission limits, or publish notice and run the risk of having its permit amendment application challenged by an affected person. Instead, the Executive Director approved Asarco's request and the permitted SO_2 emission limits for the Asarco El Paso Plant were more than doubled from 3,024 TPY to 6,501 TPY without notice to affected persons in the El Paso area. Therefore, the actual levels of SO_2 emissions from the Asarco El Paso Plant have never been properly authorized through the permit amendment process.

Additionally, on June 30, 1995, Asarco requested the annual hours of operation for the fluid bed concentrate dryer, the two sulfuric plants, and the wastewater treatment plant be increased.[45] The ED Report states increase in hours of operation resulted in "small increases" in annual emissions.[46] Again, a permit amendment is required for a change in a permit representation that results in an increase in the emission rate of any air contaminant.

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43 *See* ED Report, *supra* note 1, at 9.

44 *See id.*

45 *See id.*

46 *See id.*

Nevertheless, once again Asarco was authorized to increase its emissions from the Asarco El Paso Plant without meeting the statutory requirements that it publish notice to affected persons in the El Paso area.

Asarco's increases in permitted emissions levels without public notice and the opportunity for participation were in violation of state law in 1994 and 1995, and are still violations of state law today.

C. Asarco's Utilization of a SB 1126 Permit Alteration Circumvented TCEQ Air Quality Permitting Rules in Violation of 30 TEX. ADMIN. CODE § 101.3

The emissions increases described in Permit Actions numbers 7 and 8, on page 11 of the ED Report were not properly authorized at the time they were approved in 1996 and could not be authorized in the same manner today.[47] In 1996 Asarco circumvented state air quality regulations by increasing its production rates under a Senate Bill 1126 ("SB 1126") modification, coupled with a permit alteration to authorize an increase in its permitted emissions rates resulting from its production rate increase.

As identified in the ED Report, on August 14, 1996, Asarco obtained approval for an increase in production of copper anodes and sulfuric acid as a change to a qualified facility, *i.e.*, a SB 1126 modification.[48] The Commission's Technical Review Letter regarding the SB 1126 change states: "Through process experience and organization, ASARCO has determined that production can be increased without any significant physical changes. Production can be increased to 152,000 tons per year of copper anodes and 378,500 tons per year of sulfuric

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47 *See id.* at 11.

48 The ED Report states: "The permit conditions and MAERT needed to be updated because of the previous SB 1126 action discussed in paragraph 7." *Id.*; *see also* City of El Paso Exh. 6, "Asarco Inc Permitting History" [hereinafter Permitting History]; City of El Paso Exh. 12, "SB 1126 Letter, Technical Review" [hereinafter Technical Review Letter]. The Permitting History identifies that the SB 1126 permit alteration occurred on August 12, 1996, instead of August 14, 1996, but it is clear that while the dates are different, they refer to the same SB 1126 alteration.

acid."[49] The ED Report states that "Asarco claimed standard exemptions to increase the allowable emissions for selected equipment"; however, the permitting history shows that only two months later Asarco obtained approval for an increase in its permitted emission levels at the Asarco El Paso Plant pursuant to a permit alteration issued by the Commission on October 31, 1996.[50] The increased emissions represented on the amended Maximum Allowable Emission Rate Table ("MAERT") were due to an increase in production of copper anodes and sulfuric acid that previously had been approved as a change to a qualified facility, namely, to authorize the increases in emissions resulting from the previously-approved SB 1126 production increases.[51]

Senate Bill 1126 permit modifications are authorized by Texas Health and Safety Code Section 382.003(9)(E).[52] Section 382.003(9)(E) authorizes changes in the method of operation of a facility provided it does not "result in a *net increase* in allowable emissions of any air contaminant."[53] It is clear, based on the information in TCEQ memoranda prepared contemporaneously with the changes to Air Quality Permit No. 20345, that the increase in emissions authorized by the October 1996 permit alteration was required as a result of the August 1996 SB 1126 increases in production rates of copper anodes and sulfuric acid.[54] It is equally clear that the August 12, 1996 action and the October 28, 1996 action when considered

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49 City of El Paso Exh. 12, Technical Review Letter, *supra* note 48, at 1; see also ED Report, supra note 1, at 11.

50 *See* ED Report, supra note 1, at 11; *see also* City of El Paso Exh. 6, Permitting History, *supra* note 48, at 1. The Permitting History identifies that the permit alteration was issued on October 28, 1996, instead of October 31, 1996, but it is clear that while the dates are different, they refer to the same permit alteration.

51 *See* City of El Paso Exh. 6, Permitting History, *supra* note 48, at 1; City of El Paso Exh. 12, Technical Review Letter, *supra* note 48, at 1.

52 TEX. HEALTH & SAFETY CODE ANN. § 382.003(9)(E) (2007).

53 *Id.* (emphasis added).

54 *See* City of El Paso Exh. 12, Technical Review Letter, *supra* note 48, at 1.

together resulted in a net increase in allowable emissions of certain air contaminants. To consider the two actions separately is a violation of TCEQ rules.

Specifically, Texas Administrative Code Title 30, Section 101.3 provides: "No person shall use any plan, activity, device or contrivance which the executive director determines will, without resulting in an actual reduction of air contaminants, conceal or appear to minimize the effects of an emission which would otherwise constitute a violation of the Act or regulations."[55] Asarco's increase in copper anodes and sulfuric acid production rates by use of a SB 1126 modification on August 12, 1996, followed by a permit alteration on October 28, 1996, to increase permitted emissions from the Asarco El Paso Plant due to the production increase, is a prohibited circumvention of air quality requirements in Air Quality Permit No. 20345 and the requirements for a SB 1126 permit modification, as set out in Section 382.003(9)(E) of the Texas Health and Safety Code, and thus, is a direct violation of Texas Administrative Code Title 30, Section 101.3.[56]

Asarco increased its production rates to produce more copper and sulfuric acid at the Asarco El Paso Plant without the required permit amendment. Asarco bypassed the public notice process and avoided the possibility that its plans could be protested, thus obtaining the ability to quickly increase production, profits, and emissions, without the knowledge of any potentially affected persons in the El Paso area.

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55 30 TEX. ADMIN. CODE § 101.3 (2007).

56 While the ED Report claims that in 1996 the two actions were appropriately considered separately, such a claim cannot excuse Asarco's contravention of the applicable law and rules in 1996. *See* ED Report, *supra* note 1, at 14. The ED Report does not provide documentation to support its claim regarding what the policy was in 1996, nor does it address what level of agency review would be required today. Instead, it provides a blanket statement to excuse Asarco's clear violation of the SB 1126 standards (which are the same now as they were in 1996) and 30 TEX. ADMIN. CODE § 101.3 (which has been applicable to all air permitting actions since 1979). Asarco's contravention of TCEQ permitting requirements in 1996, while possibly deemed acceptable or simply not identified by the Executive Director when it occurred in 1996, cannot be excused today when the Commission has specifically requested a full evaluation of all of Asarco's past permitting actions.

D. Pursuant to EPA's Reactivation Policy, the Duration of Asarco's "Temporary Shutdown" Triggers PSD Review Which Has Not Occurred

The U.S. Environmental Protection Agency's ("EPA") reactivation policy requires facilities that are being reactivated after being shutdown for extended periods of time to undergo nonattainment or Prevention of Significant Deterioration ("PSD") review, as appropriate. Under the reactivation policy, stationary sources that shut down, even temporarily, may be considered new sources upon reactivation. The Environmental Protection Agency's policy identifies that the startup of a facility that has been shutdown for an extended period of time is a change in operations and thus requires PSD review. In other words, the change in operations for the facility is the increase in its hours of operation from zero to whatever is requested in its permit.

Pursuant to EPA's reactivation policy, the review is fact specific, but there is a presumption that a shutdown is permanent if it lasts longer than two years. As EPA stated in 1978:

> A source which had been shut down would be a new source for PSD purposes upon reopening if the shutdown was permanent. . . . Whether a shutdown was permanent depends upon the intention of the owner or operator at the time of the shutdown as determined from all the facts and circumstances, including the cause of the shutdown and the handling of the shutdown by the State. A shutdown lasting for two years or more, or resulting in removal of the source from the emissions inventory of the State, should be presumed permanent. The owner or operator proposing to reopen the source would have the burden of showing that the shutdown was not permanent.[57]

The Environmental Protection Agency's application of the reactivation policy has routinely required facilities that have been shutdown for a number of years, such as the Asarco El Paso Plant, to undergo nonattainment or PSD review in order to re-start operations. For example, an incinerator that had been shut down for five years and removed from the State of New York's

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[57] Memorandum from Director, Division of Stationary Source Enforcement, U.S. Environmental Protection Agency,, to Mr. Stephen A. Dvorkin, Chief, General Enforcement Branch, Region II, U.S. Environmental Protection Agency (Sept. 6, 1978).

emissions inventory was presumed new upon reactivation and was subject to PSD permitting requirements.[58] Similarly, EPA reviewed the startup of the Monroe Electric Generating Plant in Monroe, Louisiana, in 1999, and determined that, because the facility had been shutdown for an extended period of time, a PSD review was required.[59]

In the 1999 Monroe Electric Generating Plant decision (the "Monroe Order"), EPA wrote:

> [R]eactivation of facilities that have been in an extended condition of inoperation may trigger PSD requirements as "construction" of either a new major stationary source or a major modification of an existing stationary source. Where facilities are reactivated after having been permanently shutdown, operation of the facility will be treated as operation of a new source. Alternatively, shutdown and subsequent reactivation of a long-dormant facility may trigger PSD review by qualifying as a major modification.[60]

EPA's standard, as set out in the Monroe Order has two separate prongs: (1) where the facility is treated as a new source; and (2) where the re-start of the facility is treated as a major modification. Both prongs would trigger PSD review for the Asarco El Paso Plant.

With regard to being a new source, EPA wrote:

> While the policy suggests that the key determination is whether, at the time of shutdown, the owner or operator intended shutdown to be permanent, in practice, after two years, statements of original intent are not considered determinative. Instead, EPA assesses whether the owner or operator has demonstrated a continuous intent to reopen.
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> . . . EPA believes owners and operators of shutdown facilities must continuously demonstrate concrete plans to restart the facility sometime in the reasonably foreseeable future. If they cannot make such a demonstration, it

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58 *See* Memorandum from Mr. Edward E. Reich, Director, Stationary Source Enforcement Division, U.S. Environmental Protection Agency, to Mr. William K. Sawyer, General Enforcement Branch, Region II, U.S. Environmental Protection Agency (Aug. 8, 1980).

59 *See* Order Partially Granting and Partially Denying Petition for Objection to Permit, *In the Matter of Monroe Electric Generating Plant, Entergy Louisiana, Inc. Proposed Operating Permit*, Petition No. 6-99-2 (June 11, 1999) [hereinafter Monroe Order], *available at* http://www.epa.gov/region07/programs/artd/air/title5/petitiondb/petitions/entergy_decision1999.pdf.

60 *Id.* at 8.

> suggests that for at least some period of the shutdown, the shutdown was intended to be permanent. Once it is found that an owner or operator has no real plan to restart a particular facility, such owner or operator cannot overcome this suggestion that the shutdown was intended to be permanent by later pointing to the more recent efforts to reopen the facility.[61]

Asarco fails this test because it could not demonstrate that it had concrete plans to restart the Asarco El Paso Plant sometime in the reasonably foreseeable future when this issue was addressed during the Hearing on the Merits. When questioned regarding the potential start-up plans for the Asarco El Paso Plant, Asarco's expert witness, Mr. Castor, could not identify if there were any plans for startup:

> Q. And have you seen a document prepared by Asarco that identifies when this facility is going to restart?
>
> A. No, there's no such document that I know of.
>
> Q. And so there is no current intent to restart it any certain date?
>
> A. Well, I certainly hope it starts at some certain date, but I'm not privy to the strategic planning Asarco may have on that. I don't know of anything like that.
>
> Q. So it could be five years, 10 years, 15 years, 20 years down the road before it restarts?
>
> A. Theoretically, it could.[62]

While Asarco will now claim that it has all types of plans in place regarding the future startup of the Asarco El Paso Plant, it does not appear that anything more than the general statement that Asarco intended to reopen sometime in the future was in place until Asarco was threatened with the possibility of losing its case regarding renewal of Air Quality Permit No. 20345. In other words, Asarco has not demonstrated a continuous intent to re-open at a foreseeable time in the future, and thus would be considered a new source under this prong of EPA's reactivation policy.

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61 *Id.* at 9-10.

62 Tr. at 165-66 (Cross Exam (by Mr. Richard Lowerre) of Mr. Lawrence Castor).

In addition, Asarco triggers the "major modification – change in the method of operation" prong of EPA's reactivation policy, as set out in the Monroe Order. With regard to this prong of the reactivation policy, EPA wrote in the Monroe Order:

> Restart of a long-dormant facility may also be treated as a major modification subject to PSD review if it represents a "change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."[63]

This prong looks at a change in operation as the change from nonoperational status to operational status, and also considers the net increase of emissions from zero emissions at the nonoperational state to what the permitted emissions will be when the facility restarts. Under this standard, Asarco's startup of the Asarco El Paso Plant would be considered a major modification and would trigger nonattainment and PSD review.

Even before issuance of the Monroe Order by EPA, the Commission had acknowledged the applicability of EPA's reactivation policy to air quality permits in Texas; and thus, the reactivation policy must be addressed by the Commission.[64] Application and implementation of EPA's reactivation policy was not addressed in the ED Report. While Asarco may have represented in 1999 that its shutdown was only temporary and while it may now be claiming that it has plans to restart the Asarco El Paso Plant pending issuance of the renewed permit, the time in between tells another story.[65] It tells the story of a facility that has been dormant for eight

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63 Monroe Order, *supra* note 59, at 11.

64 *See* Interoffice Memorandum from Mr. Ruben Herrera, P.E., Technical Specialist, Texas Natural Resource Conservation Comm'n, to New Source Review Permits (NSRP) Engineers, Texas Natural Resource Conservation Comm'n (Aug. 4, 1998).

65 It should also be noted that there is some concern that Asarco may be engaged in "speculative permitting" with respect to the renewal of the permit for the Asarco El Paso Plant. Through the bankruptcy process, Asarco is actively seeking plan sponsors to purchase all or substantially all of Asarco's assets, which could include the Asarco El Paso Plant. *See* Transcript of Motions Hearing, *In re: ASARCO LLC*, et al., Case No. 05-21207, at 45 & 58 (Testimony of Mr. Joseph Lapinsky, President and CEO of ASARCO, LLC) (S.D. Tex. Bankr Ct. Apr. 11, 2007); *see also* ASARCO LLC, Plan of Reorganization Exit Process Timeline, *In re: ASARCO LLC*, et al., Case No. 05-21207 (S.D. Tex. Bankr. Ct).

years allowing corrosion of equipment and failing to maintain up-to-date emissions control equipment.[66] It tells the story of an owner or operator that as late as July 2005, at the Hearing on the Merits to renew Air Quality Permit No. 20345, could not identify if or when the Asarco El Paso Plant would re-start operations. It tells the story of a facility that is clearly covered by both prongs of EPA's reactivation policy, as identified in the Monroe Order.

Because EPA's reactivation policy would be triggered by any attempt by Asarco to re-start operation of the Asarco El Paso Plant, PSD review is required. As such, Air Quality Permit No. 20345 cannot simply be renewed. Instead, Asarco must file an application to amend Air Quality Permit No. 20345 and to request issuance of a federal PSD permit, and such application must be subject to all PSD permitting review requirements, including proper public and EPA notice and hearing requirements.

E. Asarco's Newest Permit Amendments Acknowledge that Asarco Has Operated the Asarco El Paso Plant in Violation of Existing Permit Requirements

The ED Report identifies that since this matter was last considered by the Commission in February 2006, Asarco has submitted two additional requests to revise Air Quality Permit No. 20345.[67] First, Asarco submitted a permit alteration on March 21, 2006, which as described in the ED Report, "would reduce allowable site lead emissions by 9.49 tons per year (TPY) and Permit No. 20345 allowable lead emissions by 5.1 TPY."[68] Second, Asarco provided a Notification of Changes to a Qualified Facility, to TCEQ in May 2006. Pursuant to that Notification of Change, Asarco notified the Commission that it would no longer be processing

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66 *See generally* EHP Review, *supra* note 18, at 6-7.

67 *See* ED Report, *supra* note 1, at 14.

68 *See id.*

East Helena matte and speiss, which are high in lead content "thus reducing potential lead emissions."[69] Both of these actions are currently pending at the Commission.

While these actions would purportedly reduce the level of lead emissions from the Asarco El Paso Plant, it is the representations made in the March 2006 application that are truly of interest in this proceeding. The March 2006 letter states:

> Asarco no longer plans to process East Helena matte and speiss at its El Paso Plant. Because East Helena matte and speiss contain significantly more lead (11.6% and 6.2%, respectively) than the copper concentrate (0.15%) that Asarco is authorized to process, the amount of lead introduced into the process will be significantly reduced. Correspondingly, the quantity of lead emitted to the atmosphere will be significantly reduced.[70]

This particular statement is of interest because it clearly illustrates two issues that were addressed repeatedly at the Hearing on the Merits: (1) Asarco was in violation of its permit throughout the operational life of the Asarco El Paso Plant after issuance of the permit in 1992; and (2) the raw materials that are processed at the Asarco El Paso Plant have a direct impact on the emissions from the facility, and because the permit has no restrictions on the input concentrate, Asarco can and has processed materials that will result in violations of the permit.

1. Asarco Repeatedly Violated the Provisions of Air Quality Permit No. 20345 While the Asarco El Paso Plant Was Operational from 1993 through 1999

Asarco's March 2006 letter clearly states that the East Helena matte and speiss contain significantly more lead than the copper concentrate, which Asarco is authorized to process pursuant to Air Quality Permit No. 20345; thus, the processing of such high lead level materials

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69 *See id.*

70 Letter from Mr. Lairy Johnson, Environmental Manager, ASARCO LLC, to Mr. Richard Hyde, Director, Air Permits Division, Texas Comm'n on Envtl. Quality (Mar. 20, 2006) [hereinafter March 2006 Permit Alteration].

could have resulted in violation of permitted lead levels. This is just the latest example of how the Asarco El Paso Plant operated in violation of Air Quality Permit No. 20345.

While the issue of Asarco's almost constant violation of Air Quality Permit No. 20345 has been addressed in detail by the City at both the Hearing on the Merits and various subsequent pleadings, it is important to briefly note the following at this time. The overwhelming evidence presented at the Hearing on the Merits demonstrated that Asarco was in violation of the emission limits set out in Air Quality Permit No. 20345 for most of the time period that the Asarco El Paso Plant was operational from 1993 through 1999. Asarco conducted limited stack testing twice after the permit was issued in 1992. On both occasions—one in 1993 and the other in 1998—Asarco determined that certain emissions from the Asarco El Paso Plant were far in exceedance of the permitted emission limitations set out in Air Quality Permit No. 20345. Thus, Asarco was violating the emissions limits in its permit.

In 1993, Asarco determined through performance testing that the Asarco El Paso Plant was emitting significantly more SO_2 than was authorized in the 1992 permit. In fact, in order to address the findings of the stack testing, Asarco had to seek an amendment of the permit to increase the level of authorized emissions of SO_2 from 50 parts per million (ppm) to 250 ppm—a five fold increase.[71] In 1994, Asarco sought another permit amendment to increase the heavy metals rates due to performance testing. Asarco found that while its particulate matter (PM) emissions overall were lower than expected, the composition of the PM emissions was "different" than it originally represented. "Different" meant "higher" for many of the heavy

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71 *See* Tr. at 71-74 (Cross Exam (by Mr. Erich Birch) of Mr. Lawrence Castor).

metals.[72] For example, the emission rate for arsenic was fourteen times higher than represented in its permit application.[73]

In 1998, following the second and last round of stack testing, Asarco determined that emissions of nitrogen oxides (NO_X) and carbon monoxide (CO) were far greater than permitted levels. Again, Asarco amended its permit in order to address the identified permit violations. The levels of authorized emissions of NO_X were increased from 89.2 TPY to 230 TPY—a two and one-half fold increase, and the levels of authorized emissions of CO were increased from 24.8 TPY to 288 TPY—approximately an *eleven fold increase* over previously permitted levels.[74]

Based on these isolated stack testing results, it is clear that Asarco spent most of its operational life after issuance of the permit in 1992 in violation of multiple emissions limitations. Asarco's newest requested revision to Air Quality Permit No. 20345 illustrates that Asarco may very well continue to operate in violation of certain emissions limitations if the permit is renewed.

2. *Raw Materials Processed at the Asarco El Paso Plant Have a Direct Impact on Emissions from the Plant, but the Permit Places No Restrictions on the Quality of the Input Raw Materials*

Also, as acknowledged in Asarco's March 2006 letter and as addressed repeatedly at the Hearing on the Merits, the raw materials that are processed at the Asarco El Paso Plant have a direct impact on the levels of emissions from the facility. But while this is a direct relationship,

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72 *See* City of El Paso Exh. 10, Letter from Mr. William R. Campbell, Acting Executive Director, Texas Comm'n on Envtl. Quality, to Mr. Tom Martin, Environmental Manager, ASARCO, Inc., at 6 (also identified as SOAH EP EXH 0028) (Nov. 4, 1994) [hereinafter Nov. 1994 Amendment].

73 *See id.* at 6; *see also* Tr. at 587 (Cross Exam (by Mr. Erich Birch) of Mr. David Cabe, P.E.).

74 *See* Tr. at 76-79 (Cross Exam (by Mr. Erich Birch) of Mr. Lawrence Castor).

the permit had inadequate provisions for limiting raw materials processed at the Asarco El Paso Plant.

The Asarco El Paso Plant processes copper concentrates that are received at the plant from different mines throughout the world. Mr. Castor could not identify how many mines supplied copper concentrates to the Asarco El Paso Plant during operation of the ConTop facilities from 1993 through 1999.[75] The significance of the origin of the materials processed at the Asarco El Paso Plant, like copper concentrate, matte, or speiss, cannot be overstated. As identified at the Hearing on the Merits, only three of the approximately 105 emission points at the Asarco El Paso Plant site are actually monitored pursuant to the requirements of the current

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[75] *See* Tr. at 61-63 (Cross Exam (by Mr. Erich Birch) of Mr. Lawrence Castor). Mr. Castor testified:

Q. Now, during the years that the Asarco – well, let's start with when the ConTop facility began operations in 1993. Where – what mines applied [sic] the copper concentrate for use at the Asarco plant?

A. The Asarco mine that provided the concentrate was the Mission Mine.

Q. Were there any other mines that provided copper concentrate to the Asarco plant?

A. Yes, there were. We were part ownership in the MRI mine in Montana and that provided concentrates. As we purchased concentrates from overseas, primarily Chile. Escondido is on one of the mines down there that I remember bringing to the plant.

Q. So in 1993 when the plant started up, were these – all the copper concentrates that came into the plant from one of these three mines?

A. They were from those three mines. There were possibly some other mines from Chile that we would purchase on occasion. I just don't recall any of the names at this point.

Q. Now, during the years of operation of the ConTop facility, did Asarco receive copper concentrate from additional mines other than the – you've mentioned two Asarco mines, a mine in Chile, and possibly other mines. Are there other mines that you are aware of, that you know of, that supplied copper concentrate to the Asarco plant during this five years of operation?

A. Well, like I just testified, there were other mines in Chile, I believe. I don't recall the names of them.

Q. Do you know how many other mines in Chile?

A. No, I don't.

Id.

permit and proposed permit, and the only pollutants monitored are SO_2 and opacity.[76] All other pollutants and emissions rates are calculated values based on representations about the incoming raw materials (*e.g.*, copper concentrate, matte, or speiss), the operation of pollution control equipment at the Asarco El Paso Plant, and generic EPA emission factors or emission factors based on one-time stack tests. The calculated or modeled emission rates of the various metals are based on the concentration of the metals in the incoming raw materials.[77]

In order to support the application for the 1992 permit, Asarco provided its permit engineer with a speciation analysis representative of the concentrations of metals and other chemicals in the incoming raw materials.[78] The permit engineer, Mr. Cabe, then used these data to calculate emissions based on the performance ratings of the pollution control equipment using emission factors of various fugitive sources.[79] Mr. Cabe provided similar information to TCEQ in support of the March 2006 and May 2006 requested revisions to the permit.[80]

However, as shown at the Hearing on the Merits, and as bolstered by Asarco's recent pending revisions to Air Quality Permit No. 20345, the speciation analysis previously provided by Asarco is not representative of the concentrations of metals in the raw materials (*e.g.*, concentrate). In fact, some mines provided copper concentrate with considerably higher

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76 *See* ACORN Exh. 5, Permit No. 20345 (transmitted via letter dated Jan. 31, 2002) at 4 & 5. There are approximately 105 emission points at the Asarco El Paso Plant site, when the facilities authorized by both Air Quality Permit No. 20345 and Air Quality Permit No. 4151 are considered. Sixty-seven of those emission points are authorized pursuant to Air Quality Permit No. 20345, and 38 emission points are authorized pursuant to Air Quality Permit No. 4151. *See* Tr. at 478 (Cross Exam (by Mr. Erich Birch) of Mr. David Cabe, P.E.); *id.* at 721.

77 *See* Tr. at 1074 (Cross Exam (by Mr. Erich Birch) of Mr. David Cabe, P.E.).

78 *See id.* at 652-53; *see also* City of El Paso Exh. 17, "Table 1, El Paso Design Basis: KHD Cyclone Retrofit, Mass Balance – Solid and Molten Streams" [hereinafter Speciation Analysis].

79 *See* Tr. at 653 (Cross Exam (by Mr. Erich Birch) of Mr. David Cabe, P.E.).

80 *See* March 2006 Permit Alteration, *supra* note 70, at Attachment; *see also* Letter from Mr. Lairy Johnson, Environmental Manager, ASARCO LLC, to Mr. Richard Hyde, Director, Air Permits Division, Texas Comm'n on Envtl. Quality at Attachment (May 17, 2006).

concentrations of certain metals, such as lead, than the concentration identified on the Asarco analysis, much like the Helena matte and speiss. For example, the copper concentrate from the J.D. Tayahua mine had arsenic levels 4.7 times higher than represented by Asarco in the speciation analysis provided to Asarco's permit engineer.[81] Lead from the J.D. Tayahua mine is also considerably higher than represented on the speciation analysis sheet.[82] The accuracy of the characterization and quantification of the metals and other chemicals received at the Asarco El Paso Plant was at issue at the Hearing on the Merits and is called into question again by Asarco's recent attempts to revise Air Quality Permit No. 20345.

Asarco does not sample the incoming raw materials for all contaminants on a routine basis, and Air Quality Permit No. 20345 does not require any monitoring of the metals emitted from the Asarco El Paso Plant. For these reasons, there is no way of knowing the actual levels of metals emitted from the Asarco El Paso Plant. One could speculate that the fourteen fold increase in arsenic levels measured during the 1993 stack testing might have been tied to higher arsenic levels in the raw materials processed during that timeframe. Since that was the one and only time that emissions of arsenic, or of any other metal, were measured at the Asarco El Paso Plant, there is no way of knowing how high metals emissions rates actually were during the years of operation.

While Asarco is seeking to revise its permit to no longer accept Helena matte and speiss at the Asarco El Paso Plant, arguably to ensure that the new round of modeling conducted by Asarco in 2006 would not demonstrate elevated levels of lead emissions as would be caused by

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81 *See* Tr. at 1072-73 (Cross Exam (by Mr. Erich Birch) of Mr. David Cabe, P.E.).

82 *See* Asarco Exh. 42, "App. J, Analysis of Materials (Particulate Speciation)," at tbl. 1 & worksheet labeled "Lab – 1854 10/21/91 JBR" [hereinafter Appendix J]; *see also* City of El Paso Exh. 17, Speciation Analysis, *supra* note 78, at 1. Lead from the J.D. Tayahua mine is present at a level of 3.4% as compared to the represented level of 0.15%. Asarco Exh. 42, Appendix J, *supra* note 82, at tbl. 1 & worksheet labeled "Lab – 1854 10/21/91 JBR."

those raw materials, the requested revision simply illustrates an ongoing problem with the current permit, the proposed permit, and any future operations of the Asarco El Paso Plant. The reality is that in 1991 and again through the newest modeling, Asarco represented what levels of metals would be in the incoming raw materials. While operational from 1993 through 1999, there was no method to ensure that the incoming raw materials did not contain metals and contaminants in excess of the represented levels.[83] In other words, Asarco has been free, and will continue to be free if the proposed permit is issued, to receive and process whatever copper concentrate, matte, or speiss that comes into the plant, without ever knowing whether the plant is in violation of the emission limitations established in Air Quality Permit No. 20345.

Asarco raised the stakes on its perceived freedom to process any raw materials in its Asarco El Paso Plant when it began processing hazardous waste at the plant. During the 2005 Hearing on the Merits, it was revealed that Asarco had received hazardous waste from its sister facility, Encycle. As identified by Mr. Castor, the Asarco El Paso Plant was processing what he described as "copper sulfide-bearing materials" from the Encycle facility.[84] While Mr. Castor's description of "copper sulfide-bearing materials" seems benign, EPA determined that the materials from Encycle were actually a hazardous waste.[85] The Asarco El Paso Plant was one of the facilities addressed in a 1999 EPA Consent Decree because of its role in processing a

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83 There is also the possibility that Asarco could emit other contaminants that are not authorized by Air Quality Permit No. 20345. For example, during the Hearing on the Merits in 2005, it was noted that in the 1992 hearing regarding Asarco's permit, the Hearings Examiner found that the new ConTop facility would not emit beryllium, yet emissions from the Asarco El Paso Plant have not been tested to determine whether the plant produces other contaminants such as beryllium, even though EPA found beryllium to be a typical contaminant emitted by copper smelters. *See* Tr. at 702-06 (Cross Exam (by Mr. Erich Birch) of Mr. David Cabe, P.E.).

84 *See id.* at 100 (Cross Exam (by Mr. Erich Birch) of Mr. Lawrence Castor).

85 *See id.* 101-02.

hazardous waste without a permit.[86] However, the seriousness of the potential impact on the citizens of El Paso was only recognized in the past year when the Commission's response to a Public Information Act request produced additional background documents regarding the range of sources of materials for the Encycle feedstock, including materials from the U.S. Army Rocky Mountain Arsenal facility.[87]

F. The ED Report Does Not Adequately Address Asarco's Fourteen Past Permitting Actions and Fails to Correctly Identify that Asarco Must Seek a Permit Amendment

At best, the ED Report provides a cursory review of the fourteen past permitting actions through which Asarco has sought to modify Air Quality Permit No. 20345 as issued in 1992. For example, with regard to a permit amendment application received on April 7, 1994, and approved by the Commission on November 4, 1994, the ED Report states:

> A permit amendment application received on April 7, 1994, requested permit representations for a number of heavy metal emission rates be revised. Stack sampling for PM and its heavy metal composition required by the 1992 permit reflected the PM EPNs CU/STK/AN[88] and S-1[89] were approximately one-half of the allowable rate and the composition of the particulate matter was different than the original representation. Since the increases in emissions of each of the heavy metals (i.e. arsenic, chromium, copper, lead, nickel, and zinc) were less than 0.01 pounds per hour, previous air dispersion modeling predictions were still valid. Also, there was no change in the character of the emissions and the emission increases were not significant, thus public notice was not required.[90]

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86 *See* City of El Paso Exh. 7, Consent Decree, *U.S. v. Encycle/Texas, Inc. & ASARCO Inc.*, (S.D. Tex. Civil Action No. H-99-1136, Oct. 7, 1999).

87 *See* Letter from Mr. Booker Harrison, Environmental Law Div., Texas Comm'n on Envtl. Quality, to Ms. Heather McMurray (July 21, 2006) (including "EPA Response to Encycle/Asarco Settlement Statement" at tbl. 1 (July 31, 1998).

88 The Copper Stack Annulus. (Footnote original to ED Report.)

89 The Spray-dryer Baghouse Stack (Footnote original to ED Report.)

90 ED Report, *supra* note 1, at 10.

As discussed briefly above, performance testing conducted in 1993 demonstrated that the modeling relied upon by Asarco in support of the 1992 permit underestimated emissions of a number of heavy metals from the Asarco El Paso Plant. As noted by the Commission when the amendment was granted, the purpose of the amendment was "to adjust heavy metal emission rates from the original representations to actual rates that were measured during required stack sampling."[91] As was demonstrated at the Hearing on the Merits, emissions rates of heavy metals were not simply "adjusted" in the amended permit," they were increased significantly.[92]

Source, Pollutant	TPY[1]		Percent Increase
	From	To	
S-1,[2] Arsenic	0.0020	0.0309	1545%
S-1,[2] Chromium	<0.0001	0.0007	>700%
S-1,[2] Chrome VI	<0.0001	0.0007	>700%
S-1,[2] Copper-dust	0.0017	0.0039	229%
S-1,[2] Copper-fume	0.0017	0.0039	229%
S-1,[2] Lead	<0.0001	0.0039	3900%
S-1,[2] Nickel	<0.0001	0.0004	400%
S-1,[2] Zinc	<0.0001	0.0077	7700%
CU/STK/AN,[3] Chromium	0.0114	0.0603	529%
CU/STK/AN,[3] Chrome VI	0.0114	0.0603	529%

1 tons per year
2 Water Treatment Plant Spray Dryer
3 Copper Stack Annulus

Not only did the Commission approve this amendment without providing public notice, characterizing it as an "adjustment" to the permit, the Commission also did not require Asarco to

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91 City of El Paso Exh. 10, Nov. 1994 Amendment, *supra* note 72, at 6 (also identified as page SOAH EP EXH 0028).

92 *See id.*

conduct modeling in support of the amendment to demonstrate whether the substantial increases in emissions would cause or contribute to a condition of air pollution in the El Paso region.[93] Only a cursory review could determine that increased arsenic and lead emissions of 1545% and 7700%, respectively, were insignificant. The total amount of these emissions of heavy metals may appear small; however, these figures underscore the sensitivity of emissions from the Asarco El Paso Plant to a change in levels of contaminants in the incoming copper concentrate. A small change in the content of a toxic metal may result in a drastic change in the character and level of emissions from the Asarco El Paso Plant.

The ED Report similarly minimizes the revisions made by a permit amendment submitted by Asarco on December 20, 1996.[94] The ED Report states that this application for amendment requested authorization to conduct outside copper matte pouring and reclaiming for not more than 720 hours per year.[95] Again, as identified in the ED Report, the Commission determined that the amendment did not require PSD review or public notice, as the "increase in emissions fell below significance values requiring those actions."[96] What the ED Report fails to address are the existing level of SO_2 emissions prior to approval of the amendment and the effects of adding the additional SO_2 emissions which were the result of the approval of the amendment.

Commission documents prepared contemporaneously with consideration of the amendment identify that the matte pouring would result in emissions of PM and SO_2.[97] Prior to the 1997 amendment, the Commission had approved an amendment in 1995 increasing the

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93 *See id.* at 4 (also identified as SOAH EP EXH 0026).

94 *See* ED Report, *supra* note 1, at 12.

95 *See id.*

96 *See id.*

97 *See* Asarco Exh. 51, Technical Review Documents, at page 5 of 7 (note that page 1 of 7 includes the handwritten note "1997 Amend. Matte Pour"). Asarco Exhibit 51 states: "Particulate matter and SO2 will be emitted when the matte is poured on the ground." *Id.*

authorized emissions of SO_2 to 2,244 pounds per hour (lbs/hr) and 6,501 TPY[98]—approximately twice the levels originally permitted in 1992. The 1995 amendment was the only one of the fourteen permitting actions submitted by Asarco that was supported by modeling. The 1995 modeling showed that the increased levels would result in SO_2 emissions of 99.8% of the state property line standard.[99] Future increases in SO_2 emissions, such as the 1997 amendment, were not supported by modeling, and because the 1995 amendment resulted in emissions of over ninety-nine percent of the standard, it appears clear that additional modeling would have been necessary, and should have been required by the Commission, to demonstrate that the additional increases approved in 1997 did not result in a violation of the pertinent standards.[100]

It should also be noted that the Commission's approval of the SB 1126 Change to a Qualified Facility and the related October 1996 permit alteration, establishing greater permitted emissions for increased production rates of copper anodes and sulfuric acid, also authorized increased SO_2 emissions. Thus, there were two Commission-approved increases in SO_2 emissions, which were not supported by additional modeling, after Asarco's 1995 modeling had identified SO_2 emissions of 99.8% of the property line standard. Only a cursory review of the

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98 *See* Asarco Exh. 27, Maximum Allowable Emission Rates (original vs. current versions of Permit No. 20345).

99 *See* City of El Paso Exh. 1, Prefiled Testimony of Ms. Jennifer Geran, P.E., at 37 [hereinafter Geran Prefiled]. With regard to the 1995 modeling for SO2, Ms. Jennifer Geran, P.E., testified:

> When re-modeled in 1995 due to a proposed significant increase in allowable SO_2 emissions, the maximum modeled concentration increased to 99.8% of the standard. This model prediction is extremely close to exceeding the standard. It would only take a small error in the input data, when corrected, to show one or more exceedances of the standard. Even if there were no model input error, the model has a margin of error significantly greater than 0.2%, indicating that there is clearly a potential for the currently authorized emission rates to exceed the standard.

Id.

100 In fact, as noted by Ms. Geran's testimony, monitoring of SO_2 was conducted by the Texas Air Control Board at the fence line of the Asarco El Paso Plant in January and February 1995, indicating exceedances of the state property line standard. Additional exceedances were measured by Asarco between October 1993 and February 1999. *See id.*

permitting actions could conclude that such emissions increases, which could easily have resulted in violations of the state property line standard, were insignificant, especially where there was no modeling to support the determination.

The ED Report's review of Asarco's past permitting actions is at best a recitation of past events. It does not fully evaluate the effects of the multiple amendments, but instead mistakenly and blindly relies on the determinations that were made at the time of the permit revisions. As addressed above, those determinations were little more than rubber stamp approvals of Asarco's requested revisions, only once (out of fourteen amendments or revisions) requiring modeling and never allowing for public input or comment. The purpose of the review required by the Interim Order was to provide an actual, substantive evaluation of the past permitting actions. That did not occur. To substantively address all of the past permitting actions, as well as Asarco's pending permitting requests, and to ensure that operation of the Asarco El Paso Plant will not cause or contribute to a condition of air pollution, the Commission should require Asarco to seek a permit amendment for Air Quality Permit No. 20345.

IV. BECAUSE THE CITY WAS NOT INCLUDED IN THE SITE INVESTIGATIONS WHICH FORM THE BASIS FOR THE ED REPORT, IT CANNOT PROVIDE SUBSTANTIVE COMMENTS

It is not possible for the City to comment on the findings, as set out in the ED Report, regarding air quality control equipment at the Asarco El Paso Plant, including the condition of the equipment at the Asarco El Paso Plant and the assessment of the sufficiency of existing plant control equipment and practices. This is simply because the City did not have the opportunity to participate in these inspections or to conduct a detailed review of the equipment and practices. Only Asarco, the Executive Director, and the consultant paid by Asarco participated in this review. The City and other Protestants participated in a walk-through tour of the Asarco El Paso Plant during discovery in preparation for the 2005 Hearing on the Merits and a drive-through

tour with the ALJs during the Hearing on the Merits. The City's recollection from those limited site visits is of a corroded, dilapidated facility much in need of repair. Otherwise, without the ability to conduct its own investigation, or to cross examine the experts who actually conducted the investigation, the City has no comments on the ED Report on these issues.

V. THERE ARE MULTIPLE DEFICIENCIES IN THE AIR QUALITY MODELING PERFORMED BY ASARCO

The TCEQ-developed "ASARCO Air Quality Analysis Modeling Protocol" stated that Asarco would provide modeling results for each modeled contaminant and each appropriate averaging time.[101] According to the TCEQ Air Modeling Dispersion Team's ("ADMT") Modeling Audit, this included overall maximum predicted concentrations anywhere off property and predicted maximum concentrations at the location of each identified school and ambient monitoring location within fifty kilometers of the Asarco El Paso Plant.[102]

As an initial matter, several questions are raised when Asarco's first "final" modeling report, which was submitted to TCEQ on September 11, 2006 ("September Modeling Report"),[103] is compared to the second final modeling report, "Air Quality Analysis for the Asarco El Paso Plant," which was submitted to TCEQ on November 22, 2006 ("November Air Quality Analysis").[104] For example, review of the two reports reveals that every modeled "controlling concentration" reported in Table 10-1 of the November Air Quality Analysis had

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101 *See* ASARCO Air Quality Analysis Modeling Protocol at 1 (Attachment D to the ED Report).

102 *See* Interoffice Memorandum from Mr. Dan Jamieson, Air Dispersion Modeling Team, Texas Comm'n on Envtl. Quality, to Mr. Dois Webb, P.E., Mechanical/Agricultural/Construction Section, Texas Comm'n on Envtl. Quality, at 2 (Apr. 13, 2007) (Attachment I to ED Report) [hereinafter TCEQ Modeling Audit].

103 Zephyr Envtl. Corp., Air Quality Analysis for Asarco El Paso Plant (Sept. 11, 2006) (signed and sealed by Mr. David B. Cabe, P.E.) [hereinafter September Report].

104 Zephyr Envtl. Corp., Air Quality Analysis for Asarco El Paso Plant (Nov. 22, 2006) (signed and sealed by Mr. David B. Cabe, P.E.) [hereinafter November Air Quality Analysis].

decreased when compared to the same table in the September Report.[105] Similarly, the maximum modeled SO_2 1-hour concentration reported in the September Report was at the standard of 0.5 ppm, whereas in the November Air Quality Analysis, the same parameter was reported as a twenty-percent lower value of 0.4 ppm.[106] The reasons for these discrepancies are unclear based on a review of the two modeling reports.

A. Asarco's Use of 24-hour Air Monitoring Data Fails to Accurately Evaluate Acute Health Effects

As will be discussed in more detail below, Asarco converted 24-hour monitoring data to one-hour values using a factor of 2.5 for comparison to the one-hour Effects Screening Level ("ESL").[107] This approach of using a factor to convert from 24-hour data to 1-hour values has the potential to underestimate the 1-hour concentration because 24-hour average concentrations are not representative of short-term or peak air concentrations. This concern was also noted in the TCEQ Modeling Audit. TCEQ instead used a factor of 0.6 to convert 1-hour model predictions to 24-hour model predictions and compared those predictions to 24-hour ESLs derived by the TCEQ's Toxicology Section.[108] While the screening conversion factor used by the ADMT to convert 1-hour modeled air concentrations to 24-hour concentrations is accepted amongst the modeling community, the TCEQ Toxicology Section used the same modeling factor to convert 1-hour ESLs to 24-hour ESLs. Not only do ESLs derived using this modeling factor lack any scientific basis whatsoever, use of the same factor to convert 1-hour ESLs and 1-hour air concentrations to their corresponding 24-hour values renders the entire exercise pointless. In

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105 *Compare* November Air Quality Analysis, *supra* note 104, at 48 at tbl. 10-1, *with* September Report, *supra* note 103, at 43 at tbl. 10-1.

106 *Compare* September Report, *supra* note 103, at 44 at tbl. 10-2, *with* November Air Quality Analysis, *supra* note 104, at 49 at tbl. 10-2.

107 See TCEQ Modeling Audit, supra note 102, at 2-3.

108 *See id.* at 3.

each case where a 1-hour air concentration exceeds a 1-hour ESL, the 24-hour air concentration exceeds the 24-hour ESL by exactly the same factor.

B. Asarco's Modeling of $PM_{2.5}$ Emissions Is Flawed

1. Modeled Concentration

Asarco used the highest monitored concentration for most NAAQS contaminants and added this level to the modeled figures for comparison to the NAAQS. However, for the 24-hour averaging period for particulate matter smaller than 2.5 microns ($PM_{2.5}$) Asarco was apparently unable to demonstrate compliance and therefore used the seventh-high concentration and added this figure to the background concentration.[109] This is inconsistent with TCEQ guidance and the Asarco Air Quality Analysis Protocol, as noted in the TCEQ Modeling Audit, which states: "Since the applicant did not model with more than one year of meteorological data, the applicant should have reported the maximum predicted concentration."[110]

The sum of the maximum modeled 24-hour concentration and the identified background monitored concentration equals the new 24-hour $PM_{2.5}$ NAAQS of 35 micrograms per cubic meter ($\mu g/m^3$).[111] However, even this does not identify the true impact because, as discussed below, the background monitor used for $PM_{2.5}$ in the NAAQS analysis is not appropriate.

2. Key Monitors Excluded in Measuring Background Concentration

In determining background concentrations to add to the modeled emissions of $PM_{2.5}$ and particulate matter smaller than 10 microns (PM_{10}), Asarco excluded two nearby monitors: the

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109 *See* November Air Quality Analysis, *supra* note 104, at 48 at tbl. 10-1, n.1.

110 *See* TCEQ Modeling Audit, *supra* note 102, at 2.

111 *See id.* at 8 at tbl. 5.

Sun Metro monitor in El Paso ($PM_{2.5}$ only) and the Sunland Park monitor in Sunland Park, New Mexico ($PM_{2.5}$ and PM_{10}).[112]

The Sun Metro monitor was excluded because of the influence from mobile sources due to its proximity to a rail yard. The Sunland Park monitoring data was also excluded from the PM_{10} and $PM_{2.5}$ background concentration analysis, even though it is one of the closest monitors to the Asarco El Paso Plant site. Asarco's argument for excluding the Sunland Park monitor is provided in Appendix B of the November Air Quality Analysis:

> The Sunland Park site is not representative of the El Paso region, in general, and the area near the plant, in particular, and was not considered further in the development of a representative background PM_{10} concentration. A monitoring specialist with the NMED Air Quality Bureau indicated that Sunland Park monitor is influenced by very localized, unique geographical features that tend to "funnel" pollutants to the monitor.[113]

The same argument is presented for $PM_{2.5}$. According to an applicable TCEQ modeling memo, in determining background concentrations for use in conducting NAAQS analyses, the "goal is to use the most conservative and readily available background concentration in the permit review process."[114]

Asarco's conclusion is that this monitor has high readings due to meteorological conditions caused by unique geographical features and should therefore be excluded. Contrary to Asarco's conclusion, the Sunland Park monitor is probably the most representative PM_{10} and $PM_{2.5}$ monitor of those that currently exist near the plant because the Asarco El Paso Plant is influenced by similarly localized, unique geographic features.

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112 The locations of the Sun Metro monitor and the Sunland Park monitor are shown on Attachment A to these Comments. *See* Sage Envtl. Consulting, L.P., PM2.5 Monitoring Stations, Fig. 1 (June 2007), attached hereto and incorporated herein for all purposes as Attachment A.

113 *See* November Air Quality Analysis, *supra* note 104, at App. B at 2.

114 Interoffice Memorandum from Mr. Dom Ruggeri, Team Leader, Air Dispersion Modeling Team, Texas Comm'n on Envtl Quality, to NSRPD Technical Staff, Texas Comm'n on Envtl. Quality (Sept. 2, 1998).

During the Paso del Norte air monitoring study, it was determined by EPA that the valley created by the Rio Grande between the Franklin Mountains and the Sierra de Juárez is subject to inversions that trap pollutants in the cooler air along the valley floor during the morning hours.[115] The Sunland Park station is located at the inlet/outlet of the narrow pass; whereas the Asarco El Paso Plant is located in the narrowest section of the "pass" between the Franklin Mountains and the Sierra de Juárez. Therefore, the funneling effect is likely even greater in and immediately adjacent to the Asarco El Paso Plant. This might result in even higher concentrations of $PM_{2.5}$ and PM_{10} occurring within one hundred meters of the Asarco El Paso Plant, which is where the maximum modeled concentrations occur. Thus, rather than ruling out the Sunland Park monitor, the Sunland Park monitor should have been the one chosen as most representative for determining the background concentrations of $PM_{2.5}$ and PM_{10}.

Instead, the University of Texas at El Paso ("UTEP") monitor was chosen by Asarco because it is the closest PM_{10} and $PM_{2.5}$ monitor to the Asarco El Paso Plant and does not experience the funneling effect. The problem with the UTEP monitor is that it is not located within the pass. It is located on the opposite side of a very large hill (rising approximately 200 feet above the base elevation of the Asarco El Paso Plant). Air pollutant plumes from the Asarco El Paso Plant and other sources of PM emissions near the plant will have a tendency to go around the hill, rather than over it, as evidenced by the low percentage of time the wind blows from the Asarco El Paso Plant towards the UTEP monitor, as depicted on the wind rose plot of meteorological data collected at the Asarco El Paso Plant, which has been relied upon by Asarco

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115 *See* NATIONAL RISK MGMT. RESEARCH LAB., U.S. ENVIRONMENTAL PROTECTION AGENCY, EPA/625/R-02/013, DELIVERING TIMELY AIR QUALITY, TRAFFIC, AND WEATHER INFORMATION TO YOUR COMMUNITY: THE PASO DEL NORTE ENVIRONMENTAL MONITORING PROJECT (Feb. 2003), *available at* http://www.epa.gov/ord/NRMRL/pubs/625r02013/625r02013.pdf.

and used in the modeling analysis.[116] In addition, the UTEP monitor is not influenced by the same localized terrain features as the Asarco El Paso Plant.

In recent years, the Rio monitor, the lone monitor located within the pass, has monitored SO_2 only. The maximum SO_2 concentrations measured at the Rio monitor during 2005 and 2006 are five to thirty-five times higher than those measured at other nearby monitors.[117] This illustrates the importance of having a monitoring station located in the immediate vicinity of the Asarco El Paso Plant. Asarco's November Air Quality Analysis states that the Rio monitor is impacted by emissions from several local sources, including nearby brick manufacturing plants in Mexico.[118] However, this is nevertheless the environment in to which emissions from the Asarco El Paso Plant, which has been shut down for over eight years, will be added, and further illustrates the importance of having a monitor at this location to determine appropriate background concentrations.

Furthermore, $PM_{2.5}$ background concentrations for the 24-hour averaging period were derived by taking the highest 95th percentile value at the UTEP monitor for the years 2003 through 2006, after subtracting out high wind days (*i.e.*, naturally-occurring dust storms).[119] This was an arbitrarily chosen method for determining the background concentration that is not supported by applicable regulations. Compliance with the recently revised 24-hour average $PM_{2.5}$ standard, as stated on page 45 of the November Air Quality Analysis, "is demonstrated if the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented

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116 *See* City of El Paso Exh. 1, Geran Prefiled, supra note 99, at Att. JG-17, Figure 13-0, Wind rose.

117 *See* November Air Quality Analysis, *supra* note 104, at App. A at tbls A-3 – A-5.

118 *See id.* at App. B at 1.

119 *See id.* at App. B at 13-14.

monitor within an area does not exceed 35 $\mu g/m^3$."[120] Therefore, the highest 98th percentile value should have been chosen as opposed to the highest 95th percentile value.

The 24-hour background concentration based on the estimated 98th percentile value is 31.3 $\mu g/m^3$ for the Sunland Park station.[121] Adding 31.3 $\mu g/m^3$ to 14 $\mu g/m^3$ (the maximum modeled $PM_{2.5}$ concentration according to the TCEQ ADMT[122]) results in a concentration of 45.3 $\mu g/m^3$. This concentration exceeds the NAAQS by 10.3 $\mu g/m^3$. A monitor located at the location of the modeled maximum 24-hour $PM_{2.5}$ concentration would likely produce an even higher background concentration due to the enhanced funneling effect occurring in that area and due to the close proximity to the other nearby PM emission sources in Mexico.[123]

Therefore, due to the unique geographical features surrounding the Asarco El Paso Plant and the other PM emission sources in Mexico, the only defensible way to determine whether the Asarco El Paso Plant causes or contributes to a PM_{10} or $PM_{2.5}$ NAAQS exceedance at the location of the maximum modeled PM_{10} and $PM_{2.5}$ concentrations would be to set up PM_{10} and $PM_{2.5}$ monitors at those locations and conduct monitoring for at least one year. Such an analysis should be completed prior to any decision regarding Asarco's application to renew Air Quality Permit No. 20345.

Asarco's November Air Quality Analysis implies that the maximum modeled $PM_{2.5}$ concentrations should be ignored because they do not occur at "population oriented" receptors.[124]

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120 *Id.* at 45.

121 Documentation supporting the derivation of this value is attached hereto and incorporated herein for all purposes as Attachment B.

122 *See* TCEQ Modeling Audit, *supra* note 102, at 8.

123 For example, in the case of SO_2, monitored values adjacent to the Asarco El Paso Plant (at the Rio monitor) were 5 to 35 times higher than at other nearby monitors. *See* November Air Quality Analysis, *supra* note 104, at App. A at tbls. A-3 – A-5.

124 *See id.* at 45.

This is not prudent, since there are residences very close to the Asarco El Paso Plant in La Calavera, and there are both residences and schools very close to the Asarco El Paso Plant across the Rio Grande in Mexico.[125] The fact that the modeled maximum concentration may not have occurred right at someone's house is not an appropriate reason to ignore this area, since the air dispersion model is not accurate enough to predict exact locations of maximum concentrations with that level of precision. The U.S. Environmental Protection Agency's Guideline on Air Quality Models ("GAQM") confirms this:

> (1) Models are more reliable for estimating longer time-averaged concentrations than for estimating short term concentrations at specific locations; and (2) the models are reasonably reliable in estimating the magnitude of highest concentrations occurring sometime, somewhere within an area. For example, errors in highest estimated concentrations of ± 10 to 40 percent are found to be typical, *i.e.*, certainly well within the often-quoted factor-of-two accuracy that has long been recognized for these models. However, estimates of concentrations that occur at a specific time and site, are poorly correlated with actually observed concentrations and are much less reliable.[126]

In light of the above demonstration that $PM_{2.5}$ emissions could exceed the NAAQS at certain locations, it is noteworthy that Asarco did not include all particulate emissions from its Asarco El Paso Plant in its modeling review. For example the particulate emissions from roads are not included in the analysis.[127] Inclusion of roads would also affect the impacts analysis for PM_{10} and metals.

3. $PM_{2.5}$ Health Effects

There is a potential for negative health effects even if the $PM_{2.5}$ standards have been met. Standards are set based on data available at the time of review, and new data have become

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125 *See, e.g., id.* at 6.

126 70 Fed. Reg. 68,218, 68,246 (Nov. 9, 2005) (amending 40 C.F.R. pt. 51, App. W, "Guideline on Air Quality Models).

127 *See generally* November Air Quality Analysis, *supra* note 104.

available on both $PM_{2.5}$ concentrations in urban cities and health effects potentially associated with $PM_{2.5}$, which suggest that health effects may occur at levels below the current $PM_{2.5}$ standards.[128] In addition, many believe that additional research and data are necessary to fully define the relationship between $PM_{2.5}$ concentrations and health effects. Particulate matter smaller than 2.5 microns was added to the suite of compounds for which monitoring data are collected to support NAAQS analyses relatively recently (*i.e.*, 1997). Therefore, we currently only have limited data with which to try and define the relationship between $PM_{2.5}$ exposure and health effects. The available health effects data generally reflect a continuum consisting of ambient levels at which scientists generally agree that health effects are likely to occur through lower levels at which the likelihood and magnitude of the response become increasingly uncertain and disagreement amongst the experts increases. Furthermore, the $PM_{2.5}$ standard is not chemically specific although it is understood that the toxicity of individual particles are not equal. It is understood that the potential for biological responses varies with particle size and trace constituents present in the PM. The fact that the standard is based on a mixture instead of a pure chemical substance suggests more uncertainty about the standard. Depending on the exact nature of the PM, it could be more or less toxic (*i.e.*, there could be additional variability in toxic effects exhibited at the same concentration depending on its specific makeup).

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128 *See* Letter from Rogene Henderson, Ph.D., Chair, Clean Air Scientific Advisory Comm., to Mr. Stephen L. Johnson, Administrator, U.S. Environmental Protection Agency (Sept. 26, 2006) (Clean Air Scientific Advisory Committee Recommendations Concerning the Final National Ambient Air Quality Standards for Particulate Matter), *available at* http://www.epa.gov/sab/pdf/casac-ltr-06-003.pdf; *see also* R.T. Burnett *et al.*, *Association Between Particulate- and Gas-Phase Components of Urban Air Pollution and Daily Mortality in Eight Canadian Cities* 12 (Supp. 4) INHALATION TOXICOLOGY 15-39 (2000); Therese F. Mar *et al.*, *Associations Between Air Pollution and Mortality in Phoenix, 1995-1997*, 108 ENVTL. HEALTH PERSPECTIVES 347-53 (Apr. 2000); David Fairley, *Daily Mortality and Air Pollution in Santa Clara County, California, 1989-1996*, 107 ENVTL. HEALTH PERSPECTIVES 637-41 (Aug. 1999).

VI. Numerous Issues Are Raised by TCEQ's Modeling Audit

The Commission's ADMT used a modeling conversion factor of 0.6 to convert 1-hour model predictions to 24-hour model results and then added the modeled predictions to monitoring results to get a total (modeled plus background) concentration for comparison to 24-hour ESLs provided by TCEQ's Toxicology Section.[129] The 24-hour ESLs provided by the Toxicology Section are discussed below.

One-hour and 24-hour site-wide modeling concentrations presented in the TCEQ Modeling Audit slightly exceed their respective ESLs for a number of compounds. It appears that the 24-hour ESLs provided by the Toxicology Section were derived by multiplying the 1-hour compound-specific ESL by a screening conversion factor of 0.6. This screening conversion factor is a modeling factor used in air modeling to convert a 1-hour modeled concentration to a longer-term concentration. The ratio between a longer-term maximum concentration and a 1-hour maximum will depend upon the duration of the longer averaging time, source characteristics, local climatology and topography, and the meteorological conditions associated with the 1-hour maximum. Generic factors for converting a 1-hour air concentration to a concentration for a longer averaging period (*i.e.*, 24-hours) are presented in *Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised*[130] ("Screening Procedures"), and the user is given some flexibility to adjust those factors to represent more closely any particular point source application where actual meteorological data are used. The factors provided in the Screening Procedures are based upon general *modeling* experience with

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129 *See* TCEQ Modeling Audit, *supra* note 102, at 3.

130 OFFICE OF AIR QUALITY PLANNING AND STANDARDS, U.S. ENVIRONMENTAL PROTECTION AGENCY, EPA-454/R-92-019, SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY IMPACT OF STATIONARY SOURCES, REVISED (Oct. 1992), *available at* http://www.maine.gov/dep/air/meteorology/screening_guidance.pdf.

elevated point sources and are only intended as a rough guide for estimating maximum concentrations for averaging times greater than one hour.[131]

The modeling factors described above are not an appropriate basis for adjusting a toxicity value because the internal dose of a chemical at the target tissue, hence the toxic effect, is dependent on the combination of time and concentration. For many compounds, the toxic effects observed for a particular compound following a single short-term exposure are completely different from those that occur after repeated, longer-term exposures. Therefore, in the absence of a calibrated, predictive Physiologically-Based Pharmacokinetic or other inhalation dosimetry model, exposure duration adjustments for toxicity benchmarks should be based on the relationship of the product of concentration and time according to TCEQ's new *Guidelines to Develop Effects Screening Levels, Reference Values, and Unit Risk Factors* ("ESL Guidelines").[132] According to the new ESL Guidelines, duration adjustments for toxicity benchmarks should be based on Haber's Rule, which defines toxicity as the product of concentration and time.[133] Using the equation below, a safe concentration for a longer exposure duration can be estimated from a 1-hour concentration:

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131 *See id.* at 15.

132 CHIEF ENGINEER'S OFFICE, TEXAS COMM'N ON ENVTL QUALITY, RG-442, GUIDELINES TO DEVELOP EFFECTS SCREENING LEVELS, REFERENCE VALUES, AND UNIT RISK FACTORS (Nov. 2006).

133 *See id.* at 27.

$$C_1^n \times T_1 = C_{24}^n \times T_{24}$$

Where:

C_1 = toxic concentration for a 1-hour exposure;

C_{24} = toxic concentration for a 24-hour exposure;

T_1 = 1-hour exposure duration or averaging time;

T_{24} = 24-hour exposure duration or averaging time; and

n = an empirically derived chemical- and endpoint-specific exponent

Generally speaking, time is less important at high doses but it dominates the low-dose end of the C × T relationship. Unfortunately, data to derive chemical-specific empirically-derived values for "n" are available for relatively few chemicals. If it is determined that concentration and duration both play a role and sufficient data for deriving a value for "n" are not available, then a default value of "n" = 1 is used to adjust the concentration at a shorter exposure duration to a longer exposure duration (*i.e.*, 1 hour to 24 hours). This is a conservative procedure since it results in a slow increase in concentration. Experimental data are deemed to be adequate for derivation of "n" if the different exposure durations of the studies are similar to the desired exposure duration, the studies evaluate the appropriate health effect endpoint, and the quality and quantity of the data are adequate.[134]

Derivation of chemical- and endpoint-specific values for "n" is beyond the scope of this evaluation and, therefore, the conservative default assumptions outlined in the ESL Guidelines have been used to estimate 24-hour ESLs from TCEQ's current 1-hour ESLs as described below. It should be noted, however, that TCEQ's ESLs are currently in the process of being revised and that the 24-hour ESLs estimated in this evaluation might well be different from values that would

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134 *See id.* at 30.

be estimated if a more rigorous approach (*i.e.*, thorough evaluation of toxicity data in the scientific literature) were to be taken.

A. Arsenic

1. 24-hour ESL

One-hour and 24-hour arsenic site-wide modeling concentrations presented in the TCEQ Modeling Audit exceed (1.7x) their respective ESLs.[135] However, it appears that the 24-hour arsenic ESL (and all other 24-hour ESLs) was derived by multiplying the 1-hour ESL by a screening conversion factor of 0.6. As described above, this screening conversion factor is a modeling factor and is not an appropriate basis for adjusting a toxicity value.

The mechanism of toxicity of all arsenic-containing compounds is the same. Once in the tissues, arsenic exerts its toxic effect through several mechanisms, the most significant of which is the reversible combination with sulfhydryl groups, resulting in inhibition of cellular enzymes and direct effects on tissues.[136] Arsenic has an intermediate half-life of twenty-four to thirty-six hours in humans. Because arsenic's most significant toxic effect is reversible (*i.e.*, recovery will occur if repeated insults do not occur) and because it has an intermediate half-life (*i.e.*, forty-eight to seventy-two hours are required to eliminate an initial dose from the body), toxicity is dependent on both the duration and concentration of exposure.

Assuming that arsenic toxicity is both concentration and time dependent, a 24-hour ESL of 0.004 $\mu g/m^3$ can be calculated from the 1-hour ESL of 0.1 $\mu g/m^3$ and assuming an "n" equal to one. The 24-hour modeled arsenic concentration exceeds this benchmark by a factor of twenty-four. The 24-hour average monitored arsenic concentration exceeds this benchmark by a

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135 *See* TCEQ Modeling Audit, *supra* note 102, at App. i at 4.

136 *See* U.S. Environmental Protection Agency, Technology Transfer Network Air Toxics Website, Arsenic Compounds (last visited June 16, 2007), *at* http://www.epa.gov/ttn/atw/hlthef/arsenic.html.

factor of twelve. The total combined air concentration (modeled plus monitored) exceeds the benchmark by a factor of thirty-six.

2. Cumulative Exposure

The Asarco El Paso Plant could contribute to existing soil contamination in neighborhoods near the smelter by emitting arsenic into the air if smelting operations are allowed to resume. This could result in increased risks of developing cancer associated with arsenic exposure for nearby residents and workers. The air concentration published by EPA for arsenic that corresponds to a one in 100,000 chronic cancer risk is 2E-03 $\mu g/m^3$. The annual ESL is five times (5x) this EPA risk-specific level, which means that the cancer risk at the annual ESL is five in 100,000. Based on the TCEQ target cancer risk goal of one in 100,000, if arsenic concentrations in air are twenty percent or greater than the ESL, then there is no room left in terms of allowable risk for any soil contamination. Similarly, if the arsenic concentrations remaining in soil exceed TCEQ's 24 milligram per kilogram (mg/kg) Protective Concentration Level, then there is no room left in terms of allowable risk for any air contamination. Even though remediation efforts have been undertaken in the El Paso area over the last three years, arsenic concentrations as high as 250 mg/kg remain, and there are still many yards of El Paso homes that have arsenic concentrations well above 24 mg/kg.

These data suggest that the Asarco El Paso Plant will contribute to a condition of air pollution if smelting operations are allowed to resume and that future emissions from the Asarco El Paso Plant could increase the risk of developing cancer for nearby residents and workers.

B. Copper Dust

One-hour and 24-hour copper dust site-wide modeling concentrations exceed (2.2x) their respective ESLs. Short-term occupational exposure to copper dust or fumes can cause eye and

respiratory tract irritation, headaches, vertigo, drowsiness, and a condition known as "metal fume fever." This twenty-four to forty-eight hour illness is characterized by an influenza-like syndrome with chills, fever, aching muscles, and dryness in the mouth and throat.[137]

Like the arsenic ESL, the 24-hour copper dust ESL was derived by multiplying the 1-hour ESL by a screening conversion factor of 0.6, which is not an appropriate basis for adjusting a toxicity value. However, since the acute toxicity endpoint for copper dust is primarily irritation, and it is known that certain health effects such as irritation may be more dependent on concentration than duration, Haber's Rule was not used to estimate a 24-hour ESL.

C. Lead

There is a potential for health effects from lead, even if the lead NAAQSs have been met. A total exposure model called the Integrated Exposure Uptake Biokinetic (IEUBK) model was used by EPA in establishing the lead NAAQS because of recognition that emissions of lead to the atmosphere are a significant source of lead in our environment, and also in recognition of the fact that human exposure is influenced not only through direct inhalation, but also through indirect exposure to lead that falls out of the air and onto other surfaces.[138] As a result, secondary exposure to lead that is emitted into the air can be very important in terms of health consequences.

In establishing national criteria, such as the lead NAAQS, assumptions and generalizations have to be made. In particular, because the IEUBK (*i.e.*, total exposure model) was used to establish the lead NAAQS, assumptions were made about lead body burdens and concentrations of lead in other media. Lead body burdens are likely to be higher in residents

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137 *See* The Risk Assessment Information System, Toxicity Profiles (last visited June 16, 2007) [hereinafter Toxicity Profiles], *at* http://rais.ornl.gov/tox/rap_toxp.shtml.

138 *See* AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY, CAS# 7439-92-1, PUBLIC HEALTH STATEMENT LEAD (Sept. 2005), *available at* http://www.atsdr.cdc.gov/toxprofiles/tp13-c1-b.pdf.

with exposure to the high lead concentrations in areas surrounding the Asarco El Paso Plant than they are in the nation as a whole. However, the body burden used by EPA in establishing the NAAQS is based on national health statistics. Likewise, the default concentrations used in the model for media such as soil (200 mg/kg) and air (0.1 ug/m^3) are much lower than the concentrations found in the residential neighborhoods surrounding the Asarco El Paso Plant. In addition, one potentially very important pathway, or transport mechanism, in this particular situation that is not taken into account by the lead model or the lead NAAQS, is re-entrainment of dust, which would ultimately contribute to the inhalation exposure.

The IEUBK model relates environmental lead concentrations to estimated blood lead levels in children zero to seven years of age. At present, the definition of elevated blood lead is 10 micrograms of lead per deciliter of blood (μg lead/dL blood), which is defined by EPA as the lower limit of the range of known possible adverse neurobehavioral effects in young children.[139] The protection level most often used in practice is a maximum of 5% risk of elevated blood lead for children in a given household.

The probability that children will have blood lead levels exceeding this level of concern can be predicted using the IEUBK model. Assuming a lead air concentration that is equal to the quarterly NAAQS (*i.e.*, 1.5 μg/m^3), soil concentrations could be no higher than 275 mg/kg if the goal is to have a probability (*i.e.*, risk) of 5% or less that children's blood lead levels will exceed the health-based level of concern . Therefore, the lead NAAQS is not protective for the portion of the El Paso community that has concentrations of lead in their yards above 275 mg/kg. Many

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139 *See* OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, U.S. ENVIRONMENTAL PROTECTION AGENCY, EPA/540/F-98/030, PB98-963244, OSWER Directive #9200.4-27P, MEMORANDUM: OSWER DIRECTIVE: CLARIFICATION TO THE 1994 REVISED INTERIM SOIL LEAD (Pb) GUIDANCE FOR CERCLA SITES AND RCRA CORRECTIVE ACTION FACILITIES (Aug. 1998) [hereinafter OSWER Directive], *available at* http://www.epa.gov/superfund/lead/products/oswer98.pdf.

yards of El Paso homes where children live still have soil lead concentrations well above this concentration.

Based on Asarco's modeling, the maximum ground level concentration (GLC_{max}) for lead is 0.2 $\mu g/m^3$, and the total concentration (GLC_{max} plus background) of lead in air is 0.27 $\mu g/m^3$. This total concentration is well below the NAAQS. However, if EPA's target goal of 5% or fewer children with blood lead levels above 10 µg/dL is to be achieved in an environment with an air concentration of 0.27 μg lead/m^3, soil lead concentrations must be less than or equal to 325 mg/kg. Despite the fact that remediation of a number of yards has been completed in the last three years, soil lead concentrations as high as 1200 mg/kg remain in yards for homes where children reside, and many yards contain lead concentrations in soil that are well above 325 mg/kg.

D. Manganese Oxide

One-hour and 24-hour manganese oxide site-wide modeling concentrations exceed (1.6x) their respective ESLs. The inhalation of manganese oxide fumes can result in chills, fever, sweating, nausea, and coughing. These influenza-like symptoms begin four to twelve hours after exposure and diminish after twenty-four hours. This "metal fume fever" usually causes no permanent damage unless exposure is continually repeated.[140] Manganese oxide has a half-life of about sixty-six days in humans after inhaling sub-micron sized particles. Because acute manganese toxicity is reversible (*i.e.*, recovery will occur if repeated insults do not occur) and because manganese oxide has a long half-life, toxicity is assumed to be dependent on both the duration and concentration of exposure.

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140 *See* Toxicity Profiles, *supra* note 137.

Assuming that manganese oxide toxicity is both concentration and time dependent, a 24-hour ESL of 0.08 $\mu g/m^3$ can be calculated from the 1-hour ESL of 2 $\mu g/m^3$ using Haber's Rule and assuming an "n" equal to one. The 24-hour average monitored manganese oxide concentration (0.175 $\mu g/m^3$) and the GLC_{max} modeled concentration (1.98 $\mu g/m^3$) exceed this benchmark by a factor of two and twenty-three, respectively. The total concentration, as represented by the modeled plus monitored manganese oxide concentrations, exceeds the 24-hour ESL by a factor of twenty-six.

E. Nickel

Acute inhalation exposure to nickel carbonyl results in initial headache, nausea, vomiting, and chest pain, progressing to hyperpnea, cyanosis, respiratory failure, and death if the exposure is severe.[141] Insoluble nickel oxide, which is the nickel species likely to be present in air, has a long half-life and persists in the lungs for more than ninety days. Given the short-term, mild reversible effects associated with acute nickel exposure and the long half-life, it is assumed that nickel toxicity is dependent on both the concentration and duration of exposure.

Neither the 1-hour nor 24-hour nickel site-wide modeling concentrations exceed their respective ESLs as presented in the TCEQ Modeling Audit. However, assuming that nickel toxicity is both concentration and time dependent, a 24-hour ESL of 0.006 $\mu g/m^3$ can be calculated from the 1-hour ESL of 0.15 $\mu g/m^3$ using Haber's Rule and assuming an "n" equal to one. The 24-hour average monitored nickel concentration (0.006 $\mu g/m^3$) is equal to the 24-hour ESL, but the GLC_{max} modeled 24-hour concentration (0.036 $\mu g/m^3$) exceeds this benchmark by a factor of almost six.

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141 *See id.*

F. Silver

One-hour and 24-hour silver site-wide modeling concentrations exceed (1.3x) their respective ESLs. However, since the acute toxicity endpoint for silver is primarily irritation,[142] and it is known that certain health effects such as irritation may be more dependent on concentration than duration, Haber's Rule was not used to estimate a 24-hour ESL.

G. $PM_{2.5}$

The 24-hour GLC_{max} plus background $PM_{2.5}$ concentration reported in the TCEQ Modeling Audit equals the 24-hour standard of 35 $\mu g/m^3$. However, the 24-hour background concentration based on the 98th percentile value is 31.3 $\mu g/m^3$ for the Sunland Park station. If this Sunland Park station background concentration is added to the maximum modeled concentration of 14 $\mu g/m^3$, the GLC_{max} plus background equals 45.3 $\mu g/m^3$, which exceeds the 24-hour $PM_{2.5}$ standard by 10.3 $\mu g/m^3$. As discussed previously, if there was a $PM_{2.5}$ monitor located closer to the maximum modeled $PM_{2.5}$ concentration, it is likely the background concentration would be even higher, resulting in larger exceedances of the 24-hour $PM_{2.5}$ NAAQS.

VII. THE HEALTH EFFECTS REVIEW PREPARED BY TCEQ IS INADEQUATE

According to the TCEQ Modeling Audit, the 24-hour ESLs used in evaluating monitored concentrations were provided by TCEQ's Toxicology Section.[143] However, the values were uniformly derived by multiplying the 1-hour compound-specific ESL by a screening conversion factor of 0.6. As discussed above, this screening conversion factor is a *generalized modeling* factor used in air modeling to convert a 1-hour modeled concentration to a longer-term concentration and is not relevant to predicting toxicity for different lengths of exposure. The

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142 *See id.*

143 *See* TCEQ Modeling Audit, *supra* note 102, at 3.

relationship between the toxicity of a compound for two different exposure periods will depend on the difference in target tissue dose following different lengths of exposure. In addition, target tissue sensitivity often changes over time and variations in target tissue sensitivity are not accounted for by simplistic conversion factors. Mechanistic information would greatly improve predictions across exposure conditions, and the Toxicology Section should obtain this type of information to derive scientifically defensible 24-hour ESLs. Because of the way the Toxicology Section completed the Health Effects Review it cannot be relied upon to show that emissions from the Asarco El Paso Plant will not result in negative health effects.

VIII. EMISSIONS FROM THE ASARCO EL PASO PLANT MUST BE EVALUATED ON A MULTI-MEDIA BASIS

As with most issues concerning the Asarco El Paso Plant, the toxicological impacts of its air emissions are not typical or simple. Many of the contaminants emitted by the Asarco El Paso Plant are of the type that do not simply dissipate into the air, but instead settle and accumulate in the soils, into water, and onto surfaces in the vicinity of the plant. For example, once lead and arsenic get into the atmosphere, they can travel long distances (if the particles are very small) or they can be removed from the air by rain and by particles falling to land or into surface water.[144] The legacy of Asarco's impact on the environment speaks for itself.

It is now generally recognized that exposure to contaminated food and soil contribute the majority of the estimated risk associated with many air toxics. In other words, exposure to impacted media that are two or three times removed from the original source of contamination tends to drive risks associated with air emissions for some compounds. These pathways tend to drive risk estimates because some compounds accumulate and even magnify (*i.e.*, increase in

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144 *See, e.g.,* AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY, CAS# 7440-38-2, PUBLIC HEALTH STATEMENT ARSENIC (Sept. 2005), *available at* http://www.atsdr.cdc.gov/toxprofiles/tp2-c1-b.pdf.

concentration on a weight to volume basis) as they are transferred from one media (*e.g.*, air) to another (*e.g.*, soil or water). The main reason that metals like lead and arsenic accumulate is because they have long half-lives (*i.e.*, the time required for a chemical introduced into a living system to be eliminated or degraded by natural processes) and because they do not degrade in the environment.

The U.S. Environmental Protection Agency's opinion regarding the importance of integrating exposure across all affected media at sites impacted by metals from smelters is apparent in the exposure models recommended for use in EPA's *Framework for Metals Risk Assessment* ("Risk Assessment Framework").[145] According to the Risk Assessment Framework: "[M]odels for a site that is impacted by a smelter might call for use of a model of an atmospheric compartment (e.g., to simulate transport of a release from a stack) and a terrestrial compartment (to simulate fate of atmospheric inputs to the soil)."[146] In addition, EPA's Total Risk Integrated Methodology ("TRIM") has also been developed for multi-pathway risk assessment for air pollutants, including metals.[147]

Asarco is one of the biggest polluters in United States history, filing bankruptcy largely because of its massive environmental liabilities. By its own admission, Asarco has environmental responsibility for almost one hundred sites across the United States and has billions of dollars in environmental liabilities.[148] The United States (through EPA and other

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145 OFFICE OF THE SCIENCE ADVISOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, EPA 120/R-07/001, FRAMEWORK FOR METALS RISK ASSESSMENT (Mar. 2007), *available at* http://www.epa.gov/osa/metalsframework/pdfs/metals-risk-assessment-final-3-8-07.pdf.

146 *Id.* at 3-24 – 3-25.

147 *See* U.S. Environmental Protection Agency, Total Risk Integrated Methodology (TRIM) – General Information (last visited June 17, 2007), *at* http://www.epa.gov/ttn/fera/trim_gen.html.

148 *See* ASARCO LLC's Motion to Estimate Environmental Liabilities and for Implementation of Procedures for the Handling of Omnibus Objections to Environmental Claims, *In re ASARCO LLC,* et al., Case No. 05-21207, at 4 (S.D. Tex. Bankr Ct. Jan. 30, 2007).

federal agencies) has environmental claims pending against Asarco of more than $4 billion.[149] Sixteen different states (including Texas (TCEQ)) also have environmental claims pending against Asarco in excess of $4 billion.[150] In addition, private parties and tribes throughout the United States have environmental claims pending against Asarco in excess of $2 billion.[151] Also, approximately $2 billion in asbestos-related claims have been asserted against Asarco.[152]

Claims filed in the on-going Asarco bankruptcy proceedings have exposed the consequences of emissions from the Asarco El Paso Plant on the El Paso area. Multiple federal and state regulators and private parties have environmental claims against Asarco due to emissions from the Asarco El Paso Plant that settled onto the ground and into the water:

1. Environmental Protection Agency Cleanup of El Paso residences (Metals Survey Site). The Environmental Protection Agency has determined that El Paso residential soil has been contaminated from air emissions of lead and arsenic from the Asarco El Paso Plant and has ordered Asarco to clean up the contamination.[153] Moreover, an expert for Asarco in the bankruptcy proceeding recently admitted that Asarco is one of the sources of lead and arsenic in El Paso residences.[154]

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149 *See id.* at 5.

150 *See id.*

151 *See id.*

152 *See* Statement of Aggregate Amount of ASARCO LLC's Asbestos Liability, *In re ASARCO LLC,* et al., Case No. 05-21207, at 1-2 (S.D. Tex. Bankr Ct. Mar. 5, 2007).

153 *See* Public Interest Counsel Exh. 4, Unilateral Administrative Order for Removal and Response Activities, *In the Matter of El Paso County Metal Survey Site, El Paso, El Paso County, Texas, Asarco, Inc., Respondent,* U.S. EPA Region 6 CERCLA Docket No. 6-8-05, at 4 (Mar. 25 [*sic*], 2005). The EPA Unilateral Administrative Order concluded that the conditions present at those residential properties constitute an imminent and substantial endangerment to public health, welfare, or the environment. *See id.* at 7.

154 *See* Supplemental Expert Report of Jeffrey Zelikson and Richard Lane White on behalf of ASARCO, LLC, *In re: ASARCO LLC,* Case No. 05-21207, at 2 (S.D. Tex. Bankr Ct. May 25, 2007). Asarco contends that there are also other sources of lead and arsenic. *See id.*

Approximately 1,100 El Paso residences were identified by EPA as being contaminated by Asarco, and Asarco itself began cleaning up El Paso residences in 2005, thereby admitting its responsibility.[155] Approximately 300 El Paso residences remain to be cleaned up as of May 2007.[156]

2. El Paso Schools. The El Paso Independent School District ("EPISD") has claims against Asarco for over $5 million for contamination of four schools located near the Asarco El Paso Plant.[157]

3. El Paso citizens. At least eighty citizens of El Paso are claiming toxic tort injuries arising from Asarco's operation of the Asarco El Paso Plant.[158]

4. The United States Section of the International Boundary and Water Commission ("USIBWC"). The USIBWC has a field office and operates the American Canal and Dam adjacent to the Asarco El Paso Plant. The USIBWC has environmental claims against Asarco based on lead and arsenic contamination of both soil and groundwater from the Asarco El Paso Plant.[159]

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155 *See* U.S. Environmental Protection Agency, "El Paso County Metals Site Update, El Paso, Texas/Sunland Park/Anapra Area, New Mexico" (May 2007) [hereinafter EPA Update]; *see also* Initial Proof of Claim (Secured) of the United States on Behalf of the United States Environmental Protection Agency, Department of Agriculture, and Department of Interior, *In re: ASARCO LLC*, Case No. 05-21207, at 20 (S.D. Tex. Bankr Ct. Feb. 16, 2006).

156 *See* EPA Update, *supra* note 155.

157 *See* El Paso Independent School District's Update of Claim Amount, Designation of Experts and Witnesses and Designation of Documents Supporting Expert Reports and Exhibits for Hearing Relating to Docket No. 3675 Estimation of ASARCO LLC's Environmental Liabilities, *In re: ASARCO LLC*, Case No. 05-21207, at 1 (S.D. Tex. Bankr Ct. May 24, 2007).

158 *See* ASARCO LLC's Motion to Establish Procedures for (A) the Handling of Omnibus Objections to the Toxic Tort Claims, and (B) the Estimation of Certain Toxic Tort Liabilities, *In re: ASARCO LLC*, et al., Case No. 05-21207, at 6 (S.D. Tex. Bankr Ct. May 31, 2007).

159 *See* Supplemental Proof of Claim of the United States on Behalf of the United States Environmental Protection Agency, the Department of Agriculture, the Department of Interior, and the United States Section of the International Boundary and Water Commission, Against ASARCO, LLC, *In re: ASARCO LLC*, et al., Case No. 05-21207, at 48 (S.D. Tex. Bankr Ct. July 28, 2006).

5. The State of Texas on Behalf of TCEQ. The TCEQ has filed claims for: unliquidated amounts related to clean up of the Asarco El Paso Plant; an unspecified amount for a Supplemental Environmental Project ("SEP"); civil fines and penalties; and $600,000 for costs already incurred in cleanup of the El Paso Metals Survey Site.[160]

Although these claims underscore the extent of contamination from past air emissions from the Asarco El Paso Plant, the concern today is with future emissions from the plant.

During its operation under Air Quality Permit No. 20345 from 1993 until its shutdown in 1999, the Asarco El Paso Plant emitted 94,000 pounds of lead and 42,000 pounds of arsenic into El Paso's air, according to EPA Toxic Release Inventory Reports.[161] If placed into operation again the Asarco El Paso Plant will continue to emit lead and arsenic into the air and onto the ground in El Paso. Even if modeling demonstrates that the level of these contaminants in the air can satisfy NAAQSs criteria and TCEQ's ESLs, over time these contaminants will settle onto the ground and again build up in the yards of homes and businesses in El Paso, resulting in risks to the health and welfare of the citizens of El Paso as well as the nearby populations in New Mexico and México.

A directive issued by EPA's Office of Solid Waste and Emergency Response recommends that risk managers assess the contribution of multiple environmental sources of lead to overall lead exposure in order to promote the development of risk reduction strategies that address all sources that contribute significantly to lead exposure.[162] Clearly arsenic is also a

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160 *See* Claims Filed by the Texas Commission on Environmental Quality Against ASARCO, LLC, *In re: ASARCO LLC*, et al., Case No. 05-21207 (S.D. Tex. Bankr Ct. July 26, 2006).

161 *See generally* U.S. Environmental Protection Agency, Toxics Release Inventory (TRI) Program (last visited June 16, 2007), *at* http://www.epa.gov/tri/.

162 *See* OSWER Directive, *supra* note 139.

multi-media problem that requires an integrated multi-media mitigation strategy. Allowing the Asarco El Paso Plant to contribute additional pollutants to air and soil that already contain toxic contaminants at concentrations above levels of concern has the potential to exacerbate significant and irreversible toxic effects that may have already occurred as a result of historical exposures and to increase the probability of other toxic health effects in the future. Because significant and irreversible toxic effects may have already occurred as a result of historical exposure to contaminants present in environmental media in the El Paso area, removal actions may not necessarily mitigate all toxic effects and emissions of problem contaminants should be limited.

IX. THE TERMS OF THE THIRD PARTY CONSULTING AGREEMENTS LIMIT THE IMPARTIALITY OF THE REVIEW AND THUS CALL INTO QUESTION THE VALIDITY OF THE RESULTS

As identified above, the Executive Director required Asarco to retain one or more qualified independent third parties to complete certain tasks identified in his May 5, 2006 letter.[163] With regard to impartiality of the third-party consultants, the Executive Director's May 5 letter stated:

> To ensure all necessary information is obtained, the ED requires that ASARCO retain one or more qualified independent third parties to perform the tasks set out below. In order to ensure the qualifications and objectivity of the independent contractors, the ED requires that ASARCO submit the proposed contractor selections and the proposed contracts to the ED for approval prior to entering the contracts. The ED also requires that all direction to the contractors and all communication with the contractors be done jointly by the ED's staff and ASARCO or that ASARCO direct its contractors to follow the direction of the ED and authorize the ED to provide specific direction and handle communications between ASARCO and its contractors.[164]

Asarco was given the option of either reimbursing TCEQ for the costs of the contracts for the required consultants or contracting directly with the third parties jointly with TCEQ pursuant to

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163 May 5 ED Letter, *supra* note 10, at 2.

164 *Id.* at 1-2.

requirements set out in the letter.[165] Asarco chose to contract directly with the two third-party contractors, EHP and Mr. Srackangast.[166]

While the Executive Director apparently approved both professional service agreements, neither agreement complies with the impartiality standards outlined in the Executive Director's May 5 letter, and the agreement between Asarco and EHP is particularly problematic. Simply the employment of EHP and Mr. Eric Partelpoeg as a third-party consultant raises issues of impartiality. Based on an affidavit, sworn to by Mr. Partelpoeg and filed with the Bankruptcy Court on or about October 24, 2005 ("Partelpoeg Affidavit"), EHP was retained by Asarco as a professional utilized in the ordinary course of business.[167] As identified in the Partelpoeg Affidavit, EHP had previously provided metallurgical consulting services to Asarco and was retained to continue providing those services.[168] Because of the past and apparently ongoing relationship between Asarco and EHP, it is difficult to fathom how EHP could be considered an impartial third party.

In addition, the Professional Services Agreement between Asarco and EHP contains the following terms that fail to meet the requirements of the Executive Director's May 5 letter and limit the impartiality of the review.

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165 *See id.*

166 *See* EHP Professional Services Agreement, *supra* note 16; Srackangast Professional Services Agreement, *supra* note 16.

167 Affidavit of Proposed Ordinary Course Professional for Debtors and Disclosure Statement Pursuant to Bankruptcy Court Sections 327, 329, and 504, Bankruptcy Rules 2014 and 2016 and the Order Authorizing Retention of Ordinary Course Professionals, *In re: ASARCO, LLC*, et al., Case No. 05-21207 (S.D. Tex. Bankr Ct. Oct. 24, 2005), attached hereto and incorporated herein for all purposes as Attachment C.

168 *See id.* at 2.

- EHP agreed that it would hold in strict confidence any and all information provided by Asarco or obtained from Asarco's site and any data, findings, and results of EHP's work.[169]
- EHP was required to provide a draft report to Asarco for review and comment prior to preparing a final report. In addition, EHP was required to consider Asarco's comments in formulating and finalizing the final report.[170]
- EHP was required to maintain confidentiality of all documents, including drafts, and Asarco retained the authority to determine what information was turned over to TCEQ and by what method (*e.g.*, under a claim of confidentiality) such information was provided to TCEQ.[171]
- EHP representatives could not enter the Asarco El Paso Plant unless they were accompanied by Asarco personnel, unless Asarco granted permission otherwise.[172]
- EHP was required to advise Asarco of any investigation or inspection by any federal, state, or local government.[173]

In addition, Asarco, through the Professional Services Agreement altered the standards for EHP's review as a process engineer of the air quality control equipment at the Asarco El Paso

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169 *See* EHP Professional Service Agreement, *supra* note 16, at 7.

170 *See id.* at Exh. A at 14.

171 *See id.* at Exh. A at 15. Additionally, the Scope of Services in the EHP Professional Services Agreement identified that Asarco and EHP were to only communicate with each other in the presence of TCEQ representatives (in person or by telephone conference) and that TCEQ was to be copied on all written or electronic correspondence. *See id.* at Exh. A at 14. Because there appears to be no evidence of such joint communication with TCEQ staff in TCEQ's files at the main office in Austin, it is impossible to determine whether such joint communication occurred.

172 *See id.* at 5.

173 *See id.* at 6.

Plant. The Executive Director's May 5 letter had instructed Asarco to retain a process engineer stating, in part: "[T]he process engineer will review and determine whether the Copper Smelter *will* operate in accordance with industry standards and practices."[174] The Scope of Services in the EHP Professional Services Agreement states: "Consultant [EHP] shall review and determine whether the Copper Smelter *could* be operated in accordance with industry standards and practices."[175] By substituting the word "could" (or "can") for the word "will" (or "would"), Asarco altered the review to be completed by EHP.[176]

There appears to be no previous relationship between Asarco and Mr. Srackangast, unlike the existing relationship between Asarco and EHP, but there are similar concerns regarding the requirements of the Professional Services Agreement between Mr. Srackangast and Asarco.[177]

The potential that the reviews provided by EHP and Mr. Srackangast are not completely impartial because of the conditions imposed by Asarco, and particularly because of the existing relationship between Asarco and EHP, leads to the inevitable conclusion that parties such as the City must be given the opportunity to determine whether the reports are truly impartial, whether communications occurred between Asarco and either EHP or Mr. Srackangast that did not include TCEQ staff, and whether the findings of the reports are indeed not only impartial but accurate. Such a determination can only be made after the City has the opportunity to seek relevant information from Asarco, TCEQ, and the third party contractors through discovery and a contested case hearing process.

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174 May 5 ED Letter, *supra* note 10, at 2 (emphasis added).

175 EHP Professional Services Agreement, *supra* note 16, Exh. A at 13 (emphasis added).

176 The word "will" means "used to express capability or sufficiency." Webster's Ninth New Collegiate Dictionary at 1350 (1985). The word "can" means "used to indicate possibility." *Id.* at 200. In other words, the Professional Services Agreement required EHP to evaluate whether there was the possibility that the Asarco El Paso Plant could be operated in accordance with industry standards, instead of evaluating whether the Asarco El Paso Plant, as currently existing, is capable of meeting industry standards.

177 *See* Srackangast Professional Services Agreement, *supra* note 16.

X. ASARCO HAS FAILED TO MEET ITS BURDEN OF PROOF REGARDING ITS APPLICATION FOR PERMIT NO. 20345, AND THUS, THE COMMISSION MUST EITHER DENY THE APPLICATION, OR IN THE ALTERNATIVE, GRANT A CONTESTED CASE HEARING TO PROVIDE ALL PARTIES THE OPPORTUNITY TO CONTEST THE INFORMATION CONTAINED IN THE ED REPORT AND ASARCO'S MODELING ANALYSES

As identified in the Interim Order, the Commission, based on its evaluation of the evidentiary record in this Administrative Procedures Act ("APA") contested case proceeding, concluded that Asarco had failed to meet its burden of proof for renewal of Air Quality Permit No. 20345 because it "had not met the statutory requirements for renewal of its permit."[178]

In addition, the ALJs, after their complete evaluation of the evidence presented during the two-week Hearing on the Merits, found that Asarco had failed to prove that emissions from the Asarco El Paso Plant would not cause or contribute to a condition of air pollution.[179] Thus, based on the evidentiary record, both the ALJs and the Commission determined that Asarco had failed to meet its burden of proof as required to support the renewal of its air quality permit.

No additional evidence has been presented since the Commission last considered this matter in February 2006 to alter those determinations, and as such, the Commission must either deny Asarco's permit, based on the conclusion that Asarco has failed to meet its burden or proof,

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178 Interim Order, *supra* note 3 at 1. The Commission's Interim Order stated:

> . . . the Commission determined that ASARCO Incorporated (Applicant or ASARCO) had not met the statutory requirements for renewal of its permit. Specifically, the Commission determined that, based on the evidentiary record from SOAH and particularly, the findings of the ALJs with regard to predicted exceedances of the significance level for PM_{10}, $PM_{2.5}$ and NO_X and of the SO_2 area control plan compliance standard, ASARCO has failed to demonstrate the effectiveness of its existing emission control equipment and practices as provided in Section 382.055(d)(2), which is a minimum condition for renewal of its permit.

Id.

179 See PFD, supra note 3, at 2. The PFD prepared by the ALJs stated in its Conclusion: "ASARCO failed to prove that its operation under Permit No. 20345, if renewed, would likely not cause or contribute to a condition of air pollution or that its compliance during its last five years of operation under this permit warrants renewal." *Id.* at 130.

or refer this matter to SOAH for additional contested case proceedings, *i.e.*, to reopen the evidentiary record. If the Commission determines that it will not deny Asarco's application at this time, the City requests a contested case hearing in the public interest to allow the City to present evidence and fully and appropriately challenge Asarco's newest modeling analyses as well as the conclusions in the ED Report. As addressed above, the City disputes numerous specific issues regarding the ED Report and Asarco's modeling analyses, and a contested case hearing is the only appropriate forum for consideration of those issues in this APA proceeding. At this juncture, such a hearing should be granted to protect the City's due process rights under the APA as a party in this proceeding.

A. The Evidentiary Record Was Closed by the ALJs and Has Not Been Reopened, so the ED Report and All Subsequent Asarco Modeling Is Outside the Evidentiary Record

The evidentiary record in this APA contested case proceeding was closed by the ALJs at the conclusion of the Hearing on the Merits. While there have been multiple briefing opportunities since the conclusion of the Hearing on the Merits, the evidentiary record has not been reopened, and no party, including the Commission, has moved that the evidentiary record be reopened.[180]

This point is particularly important because, while the evidentiary record has not been reopened, the parties—mainly the Executive Director and Asarco—have developed a significant

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[180] Texas Administrative Code Title 30, Section 80.265 provides:

> The commission, on the motion of any party or on its own motion, may order the judge to reopen the record for further proceedings on specific issues in dispute. The commission's order shall include instructions as to the subject matter of further proceedings and the judge's duties in preparing supplemental materials or revised orders based upon those proceedings for the commission's adoption.

30 TEX. ADMIN. CODE § 80.265 (2007). No party has moved to reopen the evidentiary record and the Commission, while issuing a detailed Interim Order, did not reopen the evidentiary record.

amount of new information. All of that information—the ED Report and the entirety of Asarco's modeling analyses and related modeling report—are outside the evidentiary record and are clearly in dispute, as addressed in detail above by the City.

B. The Commission's Decision Regarding Renewal of Permit No. 20345 Must Be Made on Evidence in the Evidentiary Record and Thus There Is No Basis for Approving Asarco's Application to Renew Air Quality Permit No. 20345

Pursuant to the APA, the final decision in a contested case must include findings of fact and conclusions of law.[181] "Findings of fact may be based *only* on the evidence and on matters that are officially noticed."[182] While Texas courts have found that the APA does not delineate the standards for the sufficiency of findings of facts, "the agency's decision requires at least a minimal level of factual findings in order for a reviewing court to determine whether the agency's decision *has support in the evidence*."[183] The Court of Appeals (Austin) has also stated, that while a state agency "is given a broad discretion in arriving at its findings of facts and in utilizing expert advice, the findings must still be based on evidence in the record."[184]

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181 *See* TEX. GOV'T CODE § 2001.141(b) (2007).

182 *Id.* § 2001.141(c) (emphasis added).

183 *City of Somerville v. Public Utility Comm'n of Texas*, 865 S.W.2d 557, 560 (Tex. App.—Austin 1993); *see also Smith v. Houston Chem. Services, Inc.*, 872 S.W.2d 252, 266 (Tex. App.-Austin 1994) (stating that the duty of the Texas Water Commission as a tribunal is to "determine the case based on the relevant law and the *evidence*" (emphasis added)); *City of Frisco v. Texas Water Rights Comm'n*, 579 S.W.2d 66, 72 (stating that the agency order must be "reasonably sustained by appropriate findings and conclusions that have support *in the evidence*" (emphasis added)).

184 *Flores v. Texas Dep't of Health*, 835 S.W.2d 807, 812 (Tex. App.—Austin 1992). In summarizing the requirement that a state agency rely on evidence in the record, the Appeals Court stated:

> It is well settled that an agency's exercise of its expertise must be supported by substantial evidence in the record. The Commission's expertise is not a substitute for proof. Likewise, judicially noticed information, standing alone and without supporting evidence in the record, is not a substitute for proof.

Common Carrier Motor Freight Assoc., Inc. v. Railroad Comm'n of Texas, 699 S.W.2d 291, 293 (Tex. App.—Austin 1985).

Also, the APA places strict limits on the types of information of which a state agency can take official notice:

> (a) In connection with a hearing held under this chapter, official notice may be taken of:
>
> (1) all facts that are judicially cognizable; and
> (2) generally recognized facts within the area of the state agency's specialized knowledge.[185]

In this matter, the ED Report and Asarco's modeling analyses and related modeling report are outside the evidentiary record and are not the types of materials of which the Commission can take official notice. As such, they cannot form the basis of findings of fact on which a final order or decision can be made.

In addition, pursuant to Texas Government Code Section 2001.058(e), the Commission may only change a finding of fact or conclusion of law made by the presiding ALJs if the Commission determines:

> (1) the administrative law judge did not properly apply or interpret applicable law, agency rules, written policies provided under Subsection (c), or prior administrative decisions;
> (2) that a prior administrative decision on which the administrative law judge relied is incorrect or should be changed; or
> (3) that a technical error in a finding of fact should be changed.[186]

The Commission has already determined that, with regard to PM_{10}, $PM_{2.5}$, NO_X, and SO_2, Asarco failed to meet its burden of proof in support of renewal of Air Quality Permit No. 20345;[187] thus, the Commission cannot now conclude that the ALJs findings of facts and conclusions of law regarding the emissions of those contaminants should be changed based on the factors identified

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185 TEX. GOV'T CODE § 2001.090(a) (2007). Where a state agency takes official notice of certain information, the parties must be given the opportunity to contest the material that is officially noticed. *See id.* § 2001.090(c).

186 *Id.* § 2001.058(e) (2007).

187 *See* Interim Order, *supra* note 3, at 1.

in Section 2001.058(e). Nor can the Commission seek to change those findings of fact and conclusion of law based on information outside of the evidentiary record.

For the Commission to base a final decision regarding Asarco's renewal application on the ED Report and Asarco's newest modeling analyses and related modeling report would be a violation of the City's due process rights.

> The procedural rights encompassed by due process of law are generally recognized to be as follows: notice of hearing; the opportunity to present argument and evidence and to rebut and test opposing evidence and argument by cross-examination or other appropriate means; appearance with counsel; and *a decision by a neutral decision maker based on evidence introduced into the record of the hearing.*[188]

The Texas Court of Appeals (Austin) has considered whether certain post-hearing actions constitute violations of a party's due process rights.[189] In *Smith v. Public Utility Commission of Texas*, the Court of Appeals considered whether the communications between a commissioner of the Public Utility Commission ("PUC") and a PUC staff member violated Harris County's due process rights. The Court concluded that Harris County's procedural rights under the APA had not been violated, but in doing so considered the following. The Court determined that Harris County had made "no claim that the Commissioner acquired facts, through his consultations

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188 *Smith*, 872 S.W.2d at 278 (emphasis added) (citing Bernard Schwartz, *Administrative Law* § 5.1 at 203 (2d ed. 1984). Due process requires that parties be accorded a full and fair hearing on disputed fact issues. *See Hammock v. Public Util. Comm'n*, 131 S.W.3d 713, 731 (Tex. App.—Austin 2004, pet denied).

189 *See Smith*, 872 S.W.2d at 278.

[with PUC staff], that were simultaneously (1) outside the evidentiary record and (2) grounds for the decision made by the three Commissioners."[190] Similarly, in *Railroad Commission of Texas v. Lone Star Gas Company*, the Court of Appeals (Austin) found that the Railroad Commission of Texas ("RRC") had acted arbitrarily where its final decision "was determined by ignoring the evidence and espousing a formula not supported by proof."[191] The Appeals court stated: "A valid exercise of agency expertise, like other agency action, *must find ultimate support upon evidence taken at the hearing* or upon facts officially noticed by the hearing officer in the record of such hearing."[192]

If the Commission were to base a final decision regarding Asarco's permit renewal application on the ED Report or Asarco's modeling analyses and the related modeling report, such final decision would not pass the standard set out in the *Smith* decision, and thus would not protect the City's due process rights. The ED Report and Asarco's modeling analyses and related modeling report are outside the evidentiary record; thus, they cannot be the basis for a final decision in this matter.

For all of the foregoing reasons, the Commission cannot base its final decision on the ED Report and Asarco's modeling analyses and related modeling report, and, as identified

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190 *Id.*; *see also Office of Public Utility Counsel v. Public Utility Comm'n of Texas*, 2005 S.W.3d (LWC-5314) (Tex. App. 2005). In *Office of Public Utility Counsel*, certain parties claimed that the PUC had erred by requesting and receiving evidence outside the record on particular issues without affording the opportunity for cross examination. At issue was a memorandum that had been prepared by a PUC staff member. The Appeals Court determined that the memorandum in question did not constitute extra-record evidence because it basically summarized and evaluated evidence in the record. *See id.* If the Commission relies on the ED Report and Asarco's modeling analyses in reaching a final decision in this matter, it will be relying on impermissible extra-record evidence. Neither the ED Report nor Asarco's modeling could in any way be considered a summary or an evaluation of evidence in the record.

191 *Railroad Comm'n of Texas v. Lone Star Gas Co.*, 611 S.W.2d 911, 913 (Tex. App. 1981). In *Lone Star Gas*, the RRC had admitted that its use of the discounted cash flow formula method was not supported by any evidence in the record, but had argued that its order was supported "by its own expertise." *Id.* In finding that the RRC acted arbitrarily by relying on evidence outside of the record, the Appeals Court stated that the RRC's "expertise is not a substitute for proof." *Id.*

192 *Id.* (emphasis added).

previously by the Commission, the evidentiary record does not support renewal of Air Quality Permit No. 20345. As such, the Commission can: (1) deny the permit based on either (a) Asarco's failure to comply with the Commission's permitting deadlines as established in the Interim Order, or (b) Asarco's failure to meet its burden of proof in support of its application for renewal of the permit; or (2) refer the proceeding to SOAH, instructing the ALJs to reopen the record pursuant to Texas Administrative Code Title 30, Section 80.265 for further proceedings on specific issues in dispute. To do otherwise would be a violation of the City's due process rights to rebut and test opposing evidence and would render meaningless the evidentiary record which clearly shows Asarco failed to prove that operation of the Asarco El Paso Plant would not cause or contribute to a condition of air pollution.

XI. CONCLUSION AND PRAYER

For all of the foregoing reasons, the City of El Paso respectfully requests that the Texas Commission on Environmental Quality either (1) deny ASARCO LLC's application for renewal of Air Quality Permit No. 20345; or (2) refer the proceeding to the State Office of Administrative Hearings, instructing the Administrative Law Judges to reopen the record pursuant to Texas Administrative Code Title 30, Section 80.265 for further proceedings on specific issues in dispute.

Respectfully submitted,

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ATTORNEYS FOR THE CITY OF EL PASO

CERTIFICATE OF SERVICE

I certify that an original and eleven true and correct copies of the foregoing document have been filed with the Office of the Chief Clerk of the Texas Commission on Environmental Quality. I also certify that a true and correct copy of the foregoing document has been served upon all required individuals and entities as identified on the General Counsel's Mailing List for this docket via facsimile, certified mail return receipt requested, hand delivery, overnight delivery, or electronic mail addressed to:

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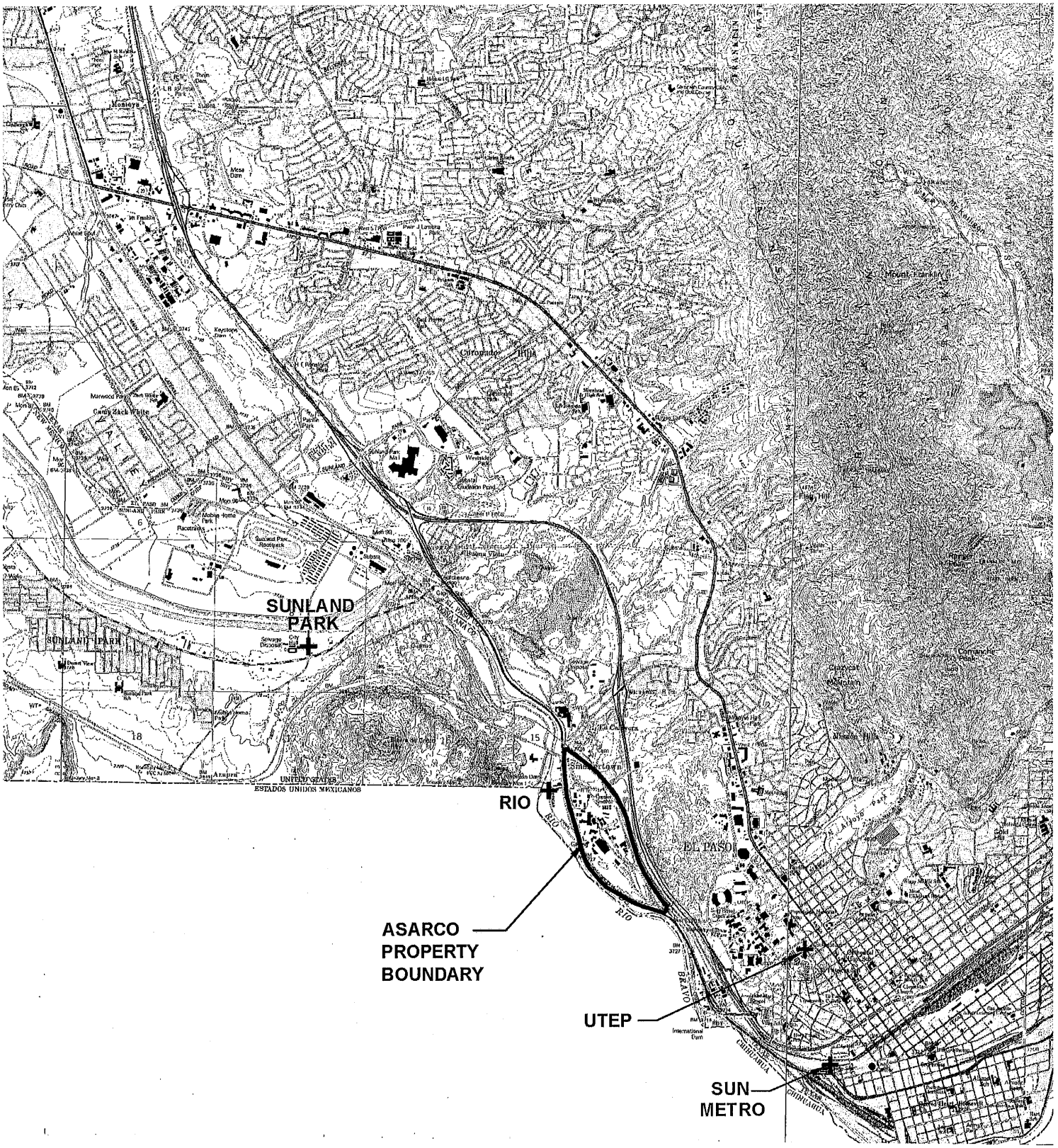
On this the 18th day of June, 2007

ERICH M. BIRCH

Attachment A



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Scale 1"= 4500'

N

SAGE
ENVIRONMENTAL CONSULTING

Drawing: Area Map.dwg	Figure 1
Revision #: 1	PM2.5 MONITORING STATIONS
Date: June 2007	Asarco, LLC
Project #: 387-1-1-1	El Paso

Attachment B

$PM_{2.5}$ Monitoring Data Summary, Sunland Park Monitoring Station, 2004 - 2006

(units are in micrograms per cubic meter)

Monitor	EPA ID No.	Distance from Asarco Plant (miles)	24-hr - Max 95th Percentile[1,2]	24-hr - Avg. 98th Percentile[1,3]	Max Annual Avg.[1,4]
Sunland Park, NM (Non-Cont.)[5]	350130017	2.2	23.9	**31.3**	10.0
Sunland Park, NM (Cont.)[6]	350130017	2.2	22.4	24.9	9.2

Notes:

1. Natural Event (i.e., dust storm) days as flagged by TCEQ were excluded from this analysis. Used the days identified by TCEQ as opposed to Air Quality Bureau of the NMED because the Air Quality Bureau is still in the process of deciding which days are appropriate to exclude.
2. Represents the maximum 95th percentile value over the three year period. This is the method Asarco used to derive the 24-hour background concentration used in the Air Quality Analysis.
3. Represents the avg. 98th percentile value over the three year period. This is the method prescribed by EPA for determining attainment vs nonattainment status for the 24-hr PM2.5 standard at a monitor.
4. Represents the maximum annual average value over the three year period.
5. The "Non-continuos" monitoring method is the federally approved reference method.
6. The "continuous" monitoring method, also referred to as TEOM data, captures more data than the non-continuous federally approved method, but it tends to underpredict compared to the federally approved method under certain circumstances.

Sunland Park, NM PM2.5 Monitoring Data, Continuous (TEOM) Monitoring Method

3-YR AVG. 98TH PERCENTILE: 24.9

2004 Highest Events		
Date	24-hr Avg	Rank
01/07/2004	38.6	1
01/28/2004	33.4	2
12/31/2004	32.2	3
05/18/2004	31.8	4
01/09/2004	29.5	5
04/29/2004	27.4	6
02/17/2004	27.2	7
07/21/2004	27.1	8

2005 Highest Events		
Date	24-hr Avg	Rank
12/10/2005	35	1
12/24/2005	31.8	2
11/22/2005	31.6	3
01/15/2005	28.9	4
12/09/2005	27.1	5
01/01/2005	26.8	6
12/25/2005	25	7
12/11/2005	24.3	8

2006 Highest Events		
Date	24-hr Avg	Rank
05/14/2006	56.5	1
06/22/2006	36	2
06/07/2006	31.9	3
05/13/2006	30.6	4
05/12/2006	27.8	5
11/18/2006	27.8	6
01/06/2006	23.6	7
11/24/2006	23	8

2004 Monitoring Data (TEOM)	
*excluding Air Pollution Events	
*excluding less then 75% captured days	
95th Percentile	22.41
98th Percentile	27.12
Annual Mean	8.94
Date	24-hr Avg
Jan 1	10.3
Jan 2	10.1
Jan 4	12.4
Jan 5	23.8
Jan 6	6.2
Jan 7	38.6
Jan 8	26.6
Jan 9	29.5
Jan 10	6.5
Jan 11	7.3
Jan 12	8.8
Jan 13	25
Jan 14	6.7
Jan 15	2.4
Jan 16	1.2
Jan 17	4
Jan 18	6.1
Jan 19	10.3
Jan 20	8.2
Jan 21	7.1
Jan 22	7.6
Jan 23	13.1
Jan 24	7.3
Jan 25	5.3
Jan 26	10.3
Jan 27	23.1
Jan 28	33.4
Jan 29	12.3
Jan 30	4.5
Feb 1	3.9
Feb 2	17.9

2005 Monitoring Data (TEOM)	
*excluding Air Pollution Events	
*excluding less then 75% captured days	
95th Percentile	19.59
98th Percentile	24.41
Annual Mean	8.70
Date	24-hr Avg
Jan 1	26.8
Jan 2	8.3
Jan 3	5
Jan 4	2.7
Jan 5	0.1
Jan 6	2.8
Jan 7	9.7
Jan 8	18.6
Jan 9	16.9
Jan 10	5.8
Jan 11	7.4
Jan 13	5.9
Jan 14	16.8
Jan 15	28.9
Jan 16	6.9
Jan 17	5.1
Jan 18	18.6
Jan 19	18.3
Jan 20	20.3
Jan 21	5
Jan 22	1.1
Jan 23	1.4
Jan 24	4.7
Jan 25	4.8
Jan 26	7.4
Jan 27	3.6
Jan 28	3.7
Jan 29	7.7
Jan 30	1.5
Jan 31	3.2
Feb 3	3.8

2006 Monitoring Data (TEOM)	
*excluding Air Pollution Events	
*excluding less then 75% captured days	
95th Percentile	19.89
98th Percentile	23.08
Annual Mean	9.24
Date	24-hr Avg
Jan 2	13.3
Jan 3	8.4
Jan 4	6.5
Jan 5	4.8
Jan 6	23.6
Jan 7	18.6
Jan 8	3.1
Jan 10	19.7
Jan 11	18
Jan 12	12.4
Jan 13	6
Jan 14	11.6
Jan 15	19.7
Jan 18	20.7
Jan 20	16.7
Jan 21	9.9
Jan 22	11.3
Jan 23	5.1
Jan 24	9.2
Jan 25	5.5
Jan 26	9.7
Jan 27	8.4
Jan 28	5.9
Jan 29	2.1
Jan 30	5.1
Jan 31	11
Feb 1	2.9
Feb 2	3.1
Feb 3	9.1
Feb 4	20.7
Feb 5	7.3

Sunland Park, NM PM2.5 Monitoring Data, Continuous (TEOM) Monitoring Method

Feb 3	7.1
Feb 4	1.7
Feb 5	1.4
Feb 6	14.8
Feb 7	8.2
Feb 8	5.1
Feb 9	9.3
Feb 10	7.3
Feb 11	7.7
Feb 12	12.3
Feb 13	8.8
Feb 14	12.6
Feb 15	17.1
Feb 16	16.9
Feb 17	27.2
Feb 18	22.7
Feb 20	7.8
Feb 21	5.2
Feb 22	7.8
Feb 23	3.2
Feb 24	1.1
Feb 25	4.4
Feb 26	10.6
Feb 27	14.4
Feb 28	7.8
Feb 29	2.6
Mar 1	6.9
Mar 2	4
Mar 3	4.6
Mar 5	2.8
Mar 6	4.6
Mar 7	4.8
Mar 8	11.2
Mar 9	16.3
Mar 10	8.8
Mar 11	7.1
Mar 12	2.2
Mar 13	4.9
Mar 14	5.2
Mar 15	5.8
Mar 16	9.9
Mar 17	5
Mar 18	15.4
Mar 19	18.2
Mar 20	14.6
Mar 21	9.4
Mar 22	5
Mar 23	3.9
Mar 24	7.1
Mar 25	11.7
Mar 26	6.5
Mar 27	5.3
Mar 28	12.1
Mar 29	5
Mar 30	6

Feb 4	2.9
Feb 5	2.2
Feb 6	2.1
Feb 7	9.1
Feb 8	8.8
Feb 9	4.5
Feb 10	3.6
Feb 11	4.5
Feb 12	1.9
Feb 13	1.1
Feb 14	2.5
Feb 15	5.6
Feb 16	8.5
Feb 17	6.1
Feb 18	8.5
Feb 19	7.9
Feb 20	3.4
Feb 21	5.1
Feb 22	3.7
Feb 23	4.3
Feb 24	1.2
Feb 25	1.1
Feb 26	3.2
Feb 27	4.4
Feb 28	3.2
Mar 3	4.2
Mar 4	6.8
Mar 5	6
Mar 6	2.9
Mar 7	2.4
Mar 8	1.9
Mar 9	8.2
Mar 10	12.7
Mar 11	15.5
Mar 12	5.7
Mar 13	3.5
Mar 14	7.3
Mar 15	2.8
Mar 16	2.8
Mar 17	3.1
Mar 18	3.5
Mar 19	3.1
Mar 20	2.6
Mar 21	4.2
Mar 22	6.4
Mar 24	7.8
Mar 25	4.3
Mar 26	2.6
Mar 27	10.7
Mar 28	8.3
Mar 30	5.6
Mar 31	7
Apr 1	6.4
Apr 2	20.9
Apr 3	8.5

Feb 6	10.7
Feb 7	20.8
Feb 8	17.2
Feb 9	12.6
Feb 10	5.3
Feb 11	14.5
Feb 12	14.3
Feb 13	7
Feb 14	5.7
Feb 15	7.5
Feb 16	5.4
Feb 18	15.1
Feb 19	5.4
Feb 20	1
Feb 21	2.6
Feb 22	8.1
Feb 23	7.2
Feb 24	6.1
Feb 25	3.4
Feb 26	3.6
Feb 27	5
Feb 28	4
Mar 1	5.2
Mar 2	9.3
Mar 3	10.1
Mar 4	6.7
Mar 5	9.1
Mar 6	18.8
Mar 7	5.8
Mar 9	2
Mar 13	4.1
Mar 14	6.9
Mar 15	8
Mar 16	8.6
Mar 17	10.4
Mar 19	12.1
Mar 20	4.7
Mar 21	8.2
Mar 22	8.3
Mar 23	6.5
Mar 24	10.8
Mar 25	16.5
Mar 26	4.6
Mar 27	9.9
Mar 28	9.4
Mar 29	10.7
Mar 30	3.9
Mar 31	10.9
Apr 1	10.2
Apr 2	20.4
Apr 3	12.2
Apr 4	10
Apr 7	10.2
Apr 8	13.7
Apr 9	21.3

Sunland Park, NM PM2.5 Monitoring Data, Continuous (TEOM) Monitoring Method

Mar 31	8.1
Apr 2	3.7
Apr 3	4.4
Apr 4	1.9
Apr 5	2.3
Apr 6	4.9
Apr 7	6.2
Apr 8	7.2
Apr 9	6.2
Apr 10	5.5
Apr 11	1.6
Apr 12	6.6
Apr 13	6.3
Apr 14	8.5
Apr 15	11.7
Apr 16	10.2
Apr 18	9.1
Apr 19	15.5
Apr 20	8.7
Apr 21	8.6
Apr 23	11.3
Apr 24	8.3
Apr 25	13.4
Apr 26	5.4
Apr 27	7.2
Apr 29	27.4
Apr 30	10.9
May 1	3.2
May 2	8.6
May 3	18
May 4	13.5
May 5	25.1
May 6	19.2
May 7	15.2
May 8	13.4
May 9	13.8
May 10	11.3
May 11	20.2
May 12	14.1
May 13	8.5
May 14	12.3
May 15	10.5
May 16	4.5
May 17	11.9
May 18	31.8
May 20	8.1
May 21	17.7
May 23	11
May 24	12.3
May 25	6.9
May 26	8.8
May 27	4.9
May 28	7.4
May 29	6.6
May 30	6.5

Apr 5	7.8
Apr 6	10
Apr 7	5.6
Apr 10	4.9
Apr 11	4
Apr 12	23.4
Apr 13	7.2
Apr 14	9.6
Apr 15	9.3
Apr 16	11.4
Apr 17	11.5
Apr 18	7.5
Apr 19	10
Apr 20	8.2
Apr 21	11.4
Apr 22	10.2
Apr 23	7.1
Apr 24	6
Apr 25	2.3
Apr 26	3.3
Apr 27	5.5
Apr 28	7.9
Apr 29	5.5
Apr 30	8.3
May 1	4.5
May 2	8.7
May 3	5.8
May 4	6
May 5	8.4
May 6	4.9
May 7	4
May 8	4.2
May 9	7.5
May 10	5.9
May 11	8.8
May 12	9.4
May 13	16.9
May 14	19.3
May 15	8.2
May 16	6.3
May 17	5.1
May 18	5
May 19	7.8
May 20	7.2
May 21	7.2
May 22	10.4
May 23	12.9
May 24	11.7
May 25	11
May 26	11.7
May 27	6.9
May 28	4.2
May 29	4.6
May 30	6.4
May 31	4.9

Apr 11	4.7
Apr 12	10.5
Apr 13	10.5
Apr 14	9.3
Apr 15	3.6
Apr 18	6.4
Apr 19	10.5
Apr 20	7.7
Apr 21	14.7
Apr 22	11.6
Apr 23	7.9
Apr 24	6.5
Apr 25	9.4
Apr 26	8.5
Apr 29	21.9
Apr 30	9.3
May 1	15.9
May 2	11.1
May 3	8
May 4	8.7
May 5	11.4
May 6	12.5
May 7	7.9
May 8	9
May 9	13
May 10	20.9
May 12	27.8
May 13	30.6
May 14	56.5
May 15	15.8
May 16	5.7
May 17	10.5
May 18	9.4
May 19	7.3
May 20	5.6
May 21	9.3
May 22	15.7
May 23	7.6
May 24	11.7
May 25	11.6
May 26	7
May 27	8.8
May 28	6.5
May 29	17.1
May 30	10.9
May 31	20.3
Jun 1	8.9
Jun 2	8.6
Jun 3	12
Jun 4	13.9
Jun 5	12.2
Jun 6	17.8
Jun 7	31.9
Jun 8	15.4
Jun 9	13.7

Sunland Park, NM PM2.5 Monitoring Data, Continuous (TEOM) Monitoring Method

May 31	7.9
Jun 1	10.8
Jun 2	18.8
Jun 4	8
Jun 5	10.5
Jun 6	10.6
Jun 9	10
Jun 10	5.1
Jun 11	10.6
Jun 12	16.5
Jun 13	17.4
Jun 14	11.4
Jun 15	10.8
Jun 16	12
Jun 17	12.6
Jun 18	12.9
Jun 19	13.9
Jun 20	17.5
Jun 22	12
Jun 23	4.9
Jun 24	13
Jun 25	9.4
Jun 26	7.5
Jun 27	17.1
Jun 28	12.5
Jun 29	4.7
Jun 30	7.3
Jul 1	15.9
Jul 2	15.6
Jul 3	14.9
Jul 4	16.2
Jul 5	22.5
Jul 6	13.3
Jul 8	8.8
Jul 10	16.8
Jul 11	7
Jul 12	7
Jul 13	5
Jul 14	14.3
Jul 15	6.1
Jul 16	8.5
Jul 17	8.2
Jul 18	11.2
Jul 19	9.9
Jul 20	26.9
Jul 21	27.1
Jul 22	6.9
Jul 23	8.2
Jul 24	5.1
Jul 25	0.9
Jul 26	0.3
Jul 27	4.1
Jul 28	2.9
Jul 29	4.1
Jul 30	6.8

Jun 1	5.2
Jun 2	6.2
Jun 3	3.5
Jun 4	5.3
Jun 5	16.1
Jun 6	2.9
Jun 7	3.2
Jun 8	5.1
Jun 9	3.3
Jun 10	4.3
Jun 11	6.1
Jun 12	7.1
Jun 13	15
Jun 14	18.1
Jun 15	8.7
Jun 16	14.9
Jun 17	10.4
Jun 18	18
Jun 19	19.5
Jun 20	12.8
Jun 21	10.5
Jun 22	11
Jun 28	7.4
Jun 29	19.5
Jun 30	17.8
Jul 1	11.8
Jul 2	10.2
Jul 3	10.1
Jul 4	21.7
Jul 5	14.1
Jul 6	8.6
Jul 7	12.9
Jul 8	10.1
Jul 9	7.7
Jul 10	11.2
Jul 11	11.5
Jul 12	10.4
Jul 13	8.2
Jul 14	12.5
Jul 15	13.1
Jul 16	10
Jul 17	10.9
Jul 18	9.7
Jul 19	7.2
Jul 20	8.9
Jul 21	7.5
Jul 22	5.6
Jul 23	9
Jul 24	13.5
Jul 25	8.3
Jul 26	9.5
Jul 27	1.7
Jul 28	2.9
Jul 29	3.9
Jul 30	13.3

Jun 10	12.6
Jun 11	10.1
Jun 12	19.9
Jun 13	9.5
Jun 14	11.1
Jun 15	17.3
Jun 16	8.3
Jun 17	19.2
Jun 18	14.7
Jun 19	18.5
Jun 20	11.5
Jun 22	36
Jun 23	9.8
Jun 24	5.5
Jun 25	8.3
Jun 26	19.8
Jun 27	12.4
Jun 29	10.5
Jun 30	9.6
Jul 1	7
Jul 2	5.6
Jul 3	7.1
Jul 4	6.1
Jul 5	6.3
Jul 6	5.5
Jul 7	9.9
Jul 8	6.8
Jul 9	6
Jul 10	5
Jul 11	6.7
Jul 12	7.2
Jul 13	6.2
Jul 14	9
Jul 15	7.2
Jul 16	7.6
Jul 17	9.2
Jul 18	8.2
Jul 19	6.9
Jul 20	7.8
Jul 21	10.5
Jul 22	9.8
Jul 23	8
Jul 24	10.2
Jul 25	10
Jul 26	11.5
Jul 27	6
Jul 28	5.7
Jul 29	3.9
Jul 30	2.3
Jul 31	2
Aug 1	2.5
Aug 2	6.3
Aug 3	3.6
Aug 4	3.1
Aug 5	3.6

Sunland Park, NM PM2.5 Monitoring Data, Continuous (TEOM) Monitoring Method

Jul 31	5.5
Aug 1	8.2
Aug 2	4.8
Aug 3	2.7
Aug 4	6
Aug 5	4.6
Aug 6	7.1
Aug 7	2.3
Aug 8	4
Aug 9	4.6
Aug 10	8.9
Aug 11	9.1
Aug 12	5.8
Aug 13	8
Aug 14	3
Aug 15	1.8
Aug 16	3.1
Aug 17	5.9
Aug 18	2.6
Aug 19	2.3
Aug 20	4.6
Aug 21	9.8
Aug 22	5
Aug 23	4.4
Aug 24	4.6
Aug 25	3
Aug 26	5.1
Aug 27	8.1
Aug 28	9
Aug 29	8
Aug 30	6.3
Aug 31	3.8
Sept 1	4.6
Sept 2	6.5
Sept 3	8.1
Sept 4	3.9
Sept 5	7.3
Sept 6	7.2
Sept 7	5.2
Sept 8	4.8
Sept 9	5.8
Sept 10	13.8
Sept 11	20
Sept 12	9.4
Sept 13	10.5
Sept 14	7.5
Sept 15	13.6
Sept 16	22.4
Sept 17	13.2
Sept 18	7.5
Sept 19	4.9
Sept 20	4.5
Sept 21	5
Sept 22	13.6
Sept 23	15.7

Jul 31	9.9
Aug 1	11.5
Aug 2	12.7
Aug 3	12.7
Aug 4	11.4
Aug 5	5.7
Aug 6	4.1
Aug 7	4.9
Aug 8	6.4
Aug 9	4.8
Aug 10	2.5
Aug 11	7.6
Aug 12	5.1
Aug 13	2.4
Aug 14	2.6
Aug 15	4.5
Aug 16	5.2
Aug 17	6.2
Aug 18	1.8
Aug 19	4
Aug 20	3.3
Aug 21	3.2
Aug 22	6.1
Aug 23	3
Aug 24	4.4
Aug 25	8
Aug 26	10.3
Aug 27	6.8
Aug 28	4.5
Aug 29	4.6
Aug 30	8
Aug 31	7
Sept 1	9.5
Sept 2	6.5
Sept 3	10.5
Sept 4	5.4
Sept 5	3.4
Sept 6	5.3
Sept 7	11.7
Sept 8	13.4
Sept 9	15.6
Sept 10	5.5
Sept 11	6
Sept 12	6.9
Sept 13	3.7
Sept 14	3.4
Sept 15	8.6
Sept 18	10.2
Sept 19	6.4
Sept 20	5.2
Sept 21	9.8
Sept 22	15
Sept 23	8
Sept 24	7.1
Sept 25	13.9

Aug 6	4
Aug 7	8.2
Aug 8	8.7
Aug 9	8.9
Aug 10	6
Aug 11	5.5
Aug 12	6
Aug 13	3.5
Aug 14	3.6
Aug 15	4.6
Aug 16	2.6
Aug 17	4.2
Aug 18	4.8
Aug 19	3.3
Aug 20	5.5
Aug 21	8.3
Aug 22	6
Aug 23	13.7
Aug 24	8.2
Aug 25	3.9
Aug 26	3.8
Aug 27	5.8
Aug 28	4.5
Aug 29	3.5
Aug 30	7.7
Aug 31	6.4
Sept 1	7.6
Sept 2	2.6
Sept 3	3.5
Sept 4	1.4
Sept 5	2.9
Sept 6	7.7
Sept 7	9
Sept 8	9.5
Sept 9	3.7
Sept 10	8.3
Sept 11	8.4
Sept 12	5.9
Sept 13	4.3
Sept 14	6.3
Sept 15	7.2
Sept 16	4.4
Sept 17	3.3
Sept 18	7.4
Sept 19	12.6
Sept 20	6.5
Sept 21	4.4
Sept 22	5.6
Sept 23	5.1
Sept 24	2.1
Sept 25	3
Sept 26	9.1
Sept 27	4.7
Sept 28	7.6
Sept 29	14.5

Sunland Park, NM PM2.5 Monitoring Data, Continuous (TEOM) Monitoring Method

Sept 24	6.8
Sept 25	3.4
Sept 26	1.8
Sept 27	2.3
Sept 28	3.9
Sept 29	6.5
Sept 30	6.9
Oct 1	8.5
Oct 2	5.8
Oct 3	5.8
Oct 4	5.9
Oct 5	4.8
Oct 6	8.4
Oct 7	6.3
Oct 8	8.1
Oct 9	11.7
Oct 10	4.8
Oct 11	3.6
Oct 12	7.2
Oct 13	5.8
Oct 14	2.4
Oct 15	2.7
Oct 16	4.7
Oct 17	6.4
Oct 18	4
Oct 19	12.9
Oct 20	9.1
Oct 21	4.5
Oct 22	2.9
Oct 23	11.9
Oct 24	8.9
Oct 25	3.9
Oct 28	2.3
Oct 29	0.7
Oct 30	7.6
Oct 31	-1.1
Nov 1	0.5
Nov 2	1.5
Nov 3	16.4
Nov 10	14.8
Nov 11	4.2
Nov 12	5.8
Nov 13	2.3
Nov 14	0.2
Nov 15	0.6
Nov 16	3.2
Nov 17	1.6
Nov 18	8.2
Nov 19	9.2
Nov 20	10.5
Nov 21	5.6
Nov 22	5.3
Nov 23	1.2
Nov 24	3
Nov 25	4

Sept 26	11.5
Sept 27	11
Sept 29	11.5
Sept 30	20.2
Oct 1	14
Oct 2	6.7
Oct 4	6.9
Oct 5	7.4
Oct 6	2.2
Oct 7	3.1
Oct 8	5
Oct 9	2.9
Oct 10	3.1
Oct 11	6.8
Oct 12	7.8
Oct 13	5
Oct 14	4.8
Oct 15	7.2
Oct 16	6.6
Oct 17	7.3
Oct 18	7.4
Oct 19	2.1
Oct 20	6.5
Oct 21	7.8
Oct 22	12
Oct 23	9.1
Oct 24	9.9
Oct 25	13.9
Oct 26	6.9
Oct 27	9.6
Oct 28	15.4
Oct 29	9.8
Oct 30	7.1
Oct 31	7.5
Nov 1	12.8
Nov 2	19.4
Nov 3	10.9
Nov 4	7.5
Nov 5	8.8
Nov 6	19
Nov 7	18.5
Nov 8	18.8
Nov 9	15.1
Nov 10	8.2
Nov 12	4
Nov 13	3.7
Nov 14	4.8
Nov 15	5
Nov 16	4.2
Nov 17	19.8
Nov 18	14.2
Nov 19	4.1
Nov 20	13.8
Nov 21	18.2
Nov 22	31.6

Sept 30	11.2
Oct 1	10
Oct 2	15.1
Oct 3	15.7
Oct 4	7.6
Oct 5	6.2
Oct 6	6.6
Oct 7	6
Oct 8	3.8
Oct 9	2.9
Oct 10	6
Oct 11	5.3
Oct 12	7.4
Oct 13	11.7
Oct 14	6.1
Oct 15	2.5
Oct 16	1.8
Oct 17	3.3
Oct 18	3.5
Oct 19	4.8
Oct 20	6
Oct 21	5.4
Oct 22	5
Oct 23	7.1
Oct 24	5.4
Oct 25	1.3
Oct 26	1.2
Oct 27	8.1
Oct 28	15.7
Oct 29	5.7
Oct 30	1.6
Oct 31	11.6
Nov 1	10.9
Nov 2	5.4
Nov 3	18.4
Nov 4	13.6
Nov 5	11.4
Nov 6	9.8
Nov 7	5.1
Nov 8	1.8
Nov 9	2.7
Nov 10	6.8
Nov 11	4.4
Nov 12	4.8
Nov 13	10.5
Nov 14	9.4
Nov 15	11.8
Nov 16	7.8
Nov 17	16.9
Nov 18	27.8
Nov 19	10.5
Nov 20	10.2
Nov 21	16.7
Nov 22	17.6
Nov 23	13.5

Sunland Park, NM PM2.5 Monitoring Data, Continuous (TEOM) Monitoring Method

Nov 26	2.4
Nov 27	13.8
Nov 28	5.1
Nov 29	1.3
Nov 30	10.8
Dec 1	21.1
Dec 2	9.6
Dec 3	10.9
Dec 4	11
Dec 5	5.7
Dec 6	0.8
Dec 7	2.2
Dec 8	1.3
Dec 9	3.9
Dec 10	10.6
Dec 11	6.6
Dec 12	14.8
Dec 13	1.8
Dec 14	1.6
Dec 15	21.1
Dec 16	1.6
Dec 17	7
Dec 18	22.3
Dec 19	19.8
Dec 20	4.4
Dec 21	3.9
Dec 22	0.2
Dec 23	0.7
Dec 24	2.7
Dec 25	12.7
Dec 26	20.1
Dec 27	17.3
Dec 28	26.8
Dec 31	32.2

Nov 23	12.4
Nov 24	11
Nov 25	9.8
Nov 26	5
Nov 29	14.2
Nov 30	12.5
Dec 1	17.1
Dec 2	6
Dec 3	4.8
Dec 4	5.7
Dec 5	16.7
Dec 6	15.2
Dec 7	22.9
Dec 8	19.6
Dec 9	27.1
Dec 10	35
Dec 11	24.3
Dec 12	17.7
Dec 13	6.4
Dec 14	11.8
Dec 15	4.9
Dec 16	6.6
Dec 17	11.8
Dec 18	23.9
Dec 19	11.8
Dec 20	14.7
Dec 21	19.6
Dec 22	17.5
Dec 23	9.8
Dec 24	31.8
Dec 25	25
Dec 26	2.4
Dec 27	2.5
Dec 28	5
Dec 29	3
Dec 30	8.9
Dec 31	2.8

Nov 24	23
Nov 25	10.1
Nov 26	15.2
Nov 27	6.1
Nov 28	3.4
Nov 29	4.1
Nov 30	2.2
Dec 1	15.1
Dec 2	9.8
Dec 3	4.5
Dec 4	13.2
Dec 5	20
Dec 6	11.8
Dec 7	3.7
Dec 8	1.8
Dec 9	14.1
Dec 10	7.3
Dec 11	1.7
Dec 12	12.1
Dec 13	9.2
Dec 14	6.7
Dec 15	10.6
Dec 16	12
Dec 17	17.2
Dec 18	11
Dec 19	4.9
Dec 20	2.1
Dec 21	12.7
Dec 22	13.2
Dec 23	6.2
Dec 24	4.9
Dec 25	6.9
Dec 26	12.8
Dec 27	15.7
Dec 28	3.2
Dec 29	3.7
Dec 30	2.8
Dec 31	15.2

Sunland Park, New Mexico PM2.5 Monitoring Data, Non-Continuous (Partisol) Monitoring Method

3-YR AVG. 98TH PERCENTILE: 31.3

2004 Highest Events		
Date	24-hr Avg	Rank
1/28/2004	39.42	1
1/7/2004	39.08	2
12/29/2004	35.52	3
12/26/2004	31.50	4
1/13/2004	25.62	5
10/30/2004	23.08	6
7/5/2004	22.04	7
3/19/2004	20.67	8

2005 Highest Events		
Date	24-hr Avg	Rank
12/24/2005	41.83	1
1/1/2005	36.79	2
12/9/2005	36.25	3
12/18/2005	29.75	4
1/19/2005	27.42	5
12/12/2005	24.08	6
12/21/2005	23.50	7
12/6/2005	20.17	8

2006 Highest Events		
Date	24-hr Avg	Rank
2/7/2006	25.50	1
6/22/2006	24.47	2
2/4/2006	23.25	3
6/7/2006	17.77	4
6/19/2006	17.75	5
9/29/2006	17.00	6
12/31/2006	16.83	7
5/29/2006	15.22	8

2004 Monitoring Data (TEOM)	
*excluding Air Pollution Events	
*excluding less then 75% captured days	
95th Percentile	22.98
98th Percentile	35.36
Annual Mean	9.96

Date	24-hr Avg
1/4/2004	14.75
1/7/2004	39.08
1/10/2004	9.87
1/13/2004	25.62
1/16/2004	4.58
1/19/2004	14.42
1/22/2004	9.83
1/25/2004	4.25
1/28/2004	39.42
2/3/2004	7.58
2/6/2004	19.29
2/9/2004	11.00
2/12/2004	9.58
2/15/2004	18.54
2/21/2004	6.58
2/24/2004	2.29
2/27/2004	17.42
3/1/2004	8.62
3/7/2004	8.08
3/13/2004	8.08
3/16/2004	9.38
3/19/2004	20.67
3/22/2004	6.33
3/25/2004	10.96
3/28/2004	10.33
3/31/2004	5.58
4/6/2004	3.08

2005 Monitoring Data (TEOM)	
*excluding Air Pollution Events	
*excluding less then 75% captured days	
95th Percentile	23.91
98th Percentile	35.47
Annual Mean	9.66

Date	24-hr Avg
1/1/2005	36.79
1/4/2005	5.38
1/7/2005	12.46
1/10/2005	9.25
1/16/2005	12.08
1/19/2005	27.42
1/22/2005	2.92
1/25/2005	7.25
1/28/2005	5.46
1/31/2005	4.54
2/3/2005	6.17
2/6/2005	2.67
2/9/2005	2.92
2/12/2005	6.08
2/18/2005	9.79
2/21/2005	9.46
2/24/2005	1.83
2/27/2005	5.21
3/5/2005	6.13
3/8/2005	2.08
3/11/2005	16.04
3/14/2005	6.29
3/17/2005	4.62
3/20/2005	3.42
3/26/2005	1.92
4/1/2005	7.29
4/7/2005	5.21

2006 Monitoring Data (TEOM)	
*excluding Air Pollution Events	
*excluding less then 75% captured days	
95th Percentile	16.98
98th Percentile	23.03
Annual Mean	9.02

Date	24-hr Avg
1/5/2006	4.92
1/8/2006	4.92
1/14/2006	13.42
1/23/2006	6.17
1/26/2006	11.58
1/29/2006	4.00
2/1/2006	5.17
2/4/2006	23.25
2/7/2006	25.50
2/10/2006	5.58
2/13/2006	12.42
2/16/2006	7.42
2/22/2006	8.50
2/25/2006	4.92
2/28/2006	5.08
3/3/2006	10.42
3/6/2006	15.17
3/15/2006	6.33
3/21/2006	7.08
3/24/2006	11.17
3/30/2006	5.33
4/2/2006	12.00
4/14/2006	9.21
5/2/2006	11.39
5/5/2006	10.29
5/8/2006	7.66
5/14/2006	9.62

Sunland Park, New Mexico PM2.5 Monitoring Data, Non-Continuous (Partisol) Monitoring Method

4/9/2004	5.08
4/12/2004	6.62
4/15/2004	12.96
4/21/2004	7.29
4/27/2004	6.00
5/3/2004	15.38
5/6/2004	12.42
5/9/2004	9.96
5/12/2004	10.58
5/15/2004	10.04
5/27/2004	5.54
5/30/2004	6.08
6/2/2004	16.75
6/11/2004	10.58
6/14/2004	9.04
6/17/2004	10.37
6/20/2004	7.37
6/26/2004	6.42
6/29/2004	6.25
7/2/2004	9.92
7/5/2004	22.04
7/14/2004	11.42
7/17/2004	6.75
7/20/2004	18.21
7/23/2004	9.13
7/26/2004	1.83
7/29/2004	5.33
8/1/2004	8.37
8/4/2004	7.87
8/7/2004	4.04
8/10/2004	11.17
8/13/2004	8.00
8/16/2004	6.46
8/19/2004	4.04
8/22/2004	6.83
8/25/2004	4.17
8/28/2004	9.25
8/31/2004	4.21
9/3/2004	9.50
9/6/2004	9.75
9/9/2004	5.37
9/12/2004	9.04
9/15/2004	11.21
9/18/2004	7.42
9/21/2004	6.50
9/24/2004	6.75
9/27/2004	3.17
10/3/2004	7.46
10/6/2004	9.46
10/9/2004	12.58
10/12/2004	9.50

4/13/2005	9.42
4/16/2005	10.08
4/19/2005	7.96
4/22/2005	7.71
4/25/2005	2.96
4/28/2005	8.17
5/1/2005	5.37
5/4/2005	7.08
5/10/2005	5.67
5/13/2005	17.46
5/16/2005	7.42
5/19/2005	7.58
5/22/2005	9.12
5/25/2005	8.75
5/28/2005	4.46
5/31/2005	5.08
5/3/2005	2.96
6/6/2005	3.87
6/9/2005	4.21
6/12/2005	5.37
6/15/2005	10.21
6/18/2005	15.04
6/21/2005	9.42
6/24/2005	8.92
6/27/2005	7.71
6/30/2005	14.71
7/3/2005	7.29
7/6/2005	8.83
7/9/2005	6.96
7/12/2005	8.54
7/15/2005	9.71
7/18/2005	8.46
7/21/2005	4.83
7/24/2005	6.42
7/27/2005	3.00
7/30/2005	10.87
8/2/2005	15.13
8/5/2005	6.83
8/8/2005	7.42
8/11/2005	7.00
8/14/2005	2.62
8/17/2005	6.08
8/20/2005	3.87
8/23/2005	3.83
8/26/2005	10.96
8/29/2005	5.87
9/1/2005	9.12
9/4/2005	6.75
9/7/2005	14.00
9/10/2005	6.92
9/13/2005	6.71

5/17/2006	10.72
5/20/2006	7.25
5/23/2006	8.08
5/26/2006	8.10
5/29/2006	15.22
6/1/2006	8.23
6/4/2006	13.07
6/7/2006	17.77
6/10/2006	14.73
6/16/2006	9.90
6/19/2006	17.75
6/22/2006	24.47
6/25/2006	7.79
6/28/2006	13.43
7/1/2006	9.42
7/4/2006	7.90
7/7/2006	12.10
7/10/2006	7.12
7/13/2006	8.59
7/16/2006	10.91
7/19/2006	9.85
7/22/2006	11.26
7/25/2006	11.96
7/28/2006	8.50
7/31/2006	5.33
8/3/2006	6.42
8/6/2006	5.25
8/9/2006	10.25
8/12/2006	6.75
8/15/2006	6.08
8/18/2006	6.67
8/21/2006	10.25
8/24/2006	10.00
8/27/2006	7.00
8/30/2006	9.92
9/2/2006	4.92
9/5/2006	5.00
9/8/2006	10.17
9/11/2006	9.00
9/14/2006	8.33
9/17/2006	4.92
9/20/2006	9.00
9/23/2006	5.33
9/26/2006	10.00
9/29/2006	17.00
10/2/2006	8.00
10/5/2006	8.17
10/8/2006	3.75
10/11/2006	4.58
10/14/2006	6.17
10/17/2006	5.00

Sunland Park, New Mexico PM2.5 Monitoring Data, Non-Continuous (Partisol) Monitoring Method

10/15/2004	3.83
10/18/2004	4.25
10/21/2004	5.75
10/24/2004	10.25
10/27/2004	4.50
10/30/2004	23.08
11/2/2004	3.33
11/5/2004	8.08
11/8/2004	5.83
11/11/2004	5.04
11/14/2004	1.21
11/17/2004	3.42
11/20/2004	12.29
11/26/2004	4.13
11/29/2004	2.25
12/2/2004	17.79
12/5/2004	14.50
12/8/2004	3.08
12/11/2004	11.04
12/14/2004	4.29
12/17/2004	10.87
12/20/2004	10.96
12/23/2004	2.50
12/26/2004	31.50
12/29/2004	35.52

9/16/2005	14.08
9/22/2005	15.75
9/25/2005	10.50
10/1/2005	12.42
10/4/2005	8.08
10/7/2005	4.33
10/10/2005	3.00
10/13/2005	5.83
10/19/2005	3.33
10/22/2005	12.83
10/25/2005	15.33
10/28/2005	10.58
10/31/2005	9.42
11/3/2005	13.42
11/6/2005	19.75
11/9/2005	17.17
11/15/2005	4.50
11/18/2005	15.42
11/21/2005	18.75
12/3/2005	5.42
12/6/2005	20.17
12/9/2005	36.25
12/12/2005	24.08
12/15/2005	8.25
12/18/2005	29.75
12/21/2005	23.50
12/24/2005	41.83
12/27/2005	4.00
12/30/2005	10.58

10/20/2006	4.17
10/23/2006	7.25
10/26/2006	3.08
10/29/2006	6.67
11/1/2006	9.00
11/4/2006	10.50
11/7/2006	4.50
11/10/2006	5.17
11/13/2006	4.58
11/16/2006	6.25
11/19/2006	6.25
11/22/2006	10.50
11/25/2006	8.42
11/28/2006	5.33
12/1/2006	11.33
12/4/2006	12.08
12/7/2006	6.33
12/10/2006	9.17
12/13/2006	6.00
12/16/2006	7.42
12/19/2006	7.58
12/22/2006	12.17
12/25/2006	6.92
12/28/2006	6.17
12/31/2006	16.83

Attachment C

filed on 10/27/05

IN THE UNITED STATES BANKRUPTCY COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
CORPUS CHRISTI DIVISION

In re:	§	
	§	
ASARCO LLC, *et al.*,	§	**Case No. 05-21207**
	§	**(Chapter 11)**
Debtors.	§	
	§	**(Jointly Administered)**
	§	
	§	
	§	
	§	

AFFIDAVIT OF PROPOSED ORDINARY COURSE PROFESSIONAL FOR DEBTORS AND DISCLOSURE STATEMENT PURSUANT TO BANKRUPTCY COURT SECTIONS 327, 329 AND 504, BANKRUPTCY RULES 2014 AND 2016 AND THE ORDER AUTHORIZING RETENTION OF ORDINARY COURSE PROFESSIONALS

STATE OF ARIZONA)
)
COUNTY OF PIMA)

Eric Partelpoeg, being duly sworn, deposes and says:

1. I am the president of EHP Consulting, Inc. (the "Company"), which maintains offices at 6038 N. Camino Miraval, Tucson, Arizona 85718.

2. On September 7, 2005, ASARCO LLC, Lac d'Amiante du Québec Ltée (f/k/a Lake Asbestos of Quebec, Ltd.); Lake Asbestos of Quebec, Ltd.; LAQ Canada, Ltd.; CAPCO Pipe Company, Inc. (f/k/a/ Cement Asbestos Products Company); and Cement Asbestos Products Company, Debtors and Debtors in Possession in the above-captioned cases (collectively, the "Debtors") filed in the United States Bankruptcy Court for the Southern District of Texas (the "Bankruptcy Court") a motion pursuant to sections 327 and 105 of title 11 of the United States Code (the "Bankruptcy Code"), requesting authority to retain certain professionals utilized in the ordinary course of business. On October 3, 2005, the Bankruptcy

Court entered an order authorizing the Debtors to retain certain professionals utilized in the ordinary course of their business (the "Retention Order").

3. Neither I, the Company, nor any officer or employee of the Company, insofar as I have been able to ascertain, has any connection with the Debtors, their creditors, or any other party in interest, or their attorneys, except as set forth in this affidavit.

4. The Company, through me, and other officers and employees of the Company, has provided the following services to ASARCO LLC: metallurgical consulting.

5. At the request of ASARCO LLC, the Company has agreed to continue to provide these services to the Debtors pursuant to section 327 of the Bankruptcy Code.

6. The Company's customary rates, subject to change from time to time, are $145 per hour. In the normal course of business, the Company revises its regular rates on January 1 of each year and requests that, effective January 1 of each year, the aforementioned rates be revised to the regular rates which will be in effect at that time.

7. The Company has no amounts due for prepetition services rendered to the Debtors.

8. Except as set forth herein, no promises have been received by the Company or any officer or employee thereof as to compensation in connection with these chapter 11 cases other than in accordance with the provisions of the Bankruptcy Code, the Federal Rules of Bankruptcy Procedure, the Local Rules of the Bankruptcy Court, the Retention Order and other orders of the Bankruptcy Court, and the Fee Guidelines promulgated by the United States Trustee.

9. Neither I nor any other officer or employee of the Company has agreed to share or will share any portion of the compensation to be received from the Debtors with any person other than the officers and employees of the Company.

10. The Company and its officers and employees may have in the past provided services to, currently provide services to and may in the future provide services to entities that are claimants, employees of the Debtors, or other parties in interest in these chapter 11 cases in matters unrelated to these chapter 11 cases. The Company does not and will not provide services to any such entity in connection with these chapter 11 cases and does not have any relationship with any such entity or its attorneys or accountants that would be materially adverse to the Debtors or their estates.

11. The foregoing constitutes the statement of the Company pursuant to sections 327, 329, and 504 of the Bankruptcy Code and Rules 2014 and 2016 of the Federal Rules of Bankruptcy Procedure.

12. Neither I, the Company, nor any other officer or employee thereof, insofar as I have been able to ascertain, holds or represents any interest adverse to the Debtors or their estates in matters upon which the Company is to be engaged.

FURTHER AFFIANT SAYETH NAUGHT

Signed this 24 day of October, 2005.

[Affiant Name] ERIC PARTELPOEG

SWORN TO AN SUBSCRIBED before me, the undersigned authority, on this 24th day of October, 2005.

OFFICIAL SEAL
DOROTHY M. SMITH
NOTARY PUBLIC - State of Arizona
PIMA COUNTY
My Comm. Expires Oct. 31, 2006

Notary Public